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ABSTRACT

For many years several organizations and agencies at the national, regional, and local level have sought to reduce the incidence of cancer by publicizing facts on prevention, screening/detection, and treatment. This report reviews 41 public communication programs on cancer. Fifteen of these are presented as detailed case studies, each having achieved some success in reaching the public, and each having unique features which could be incorporated in future programs. A series of recommendations and needs are described based on these reviews. Primary needs are identified as greater awareness of social science literature, and a less intuitive and more empirical rationale for strategy choice. Planning suggestions include pilot testing to match media with audience characteristics; specifying desired outcomes to measure effectiveness; specifying contexts of the program to avoid ineffective settings; and finally, consideration of the language, length, and complexity of the entire message for maximum effectiveness. It is also suggested that a regularly commissioned large scale survey be used to determine knowledge, attitude, and reported behaviors; that workshops of effective strategies for teaching the public be organized regionally, or nationally; finally, that all planners should contribute to a guide on public communication strategy that other planners could use. (DAG)

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PUBLIC COMMUNICATION PROGRAMS FOR CANCER CONTROL

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February, 1975

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CHAPTER I: SUMMARY AND RECOMMENDATIONS

One of the most difficult tasks of a public agency is to change public knowledge, attitudes, or behavior through the mechanism of public communication programs. For many years several organizations and agencies at the national, regional, and local levels have sought to reduce the incidence of cancer among the American public by publicizing the basic facts of cancer prevention, screening/detection, and treatment. Some programs undertaken by these groups appear to have achieved limited success; others have had equivocal outcomes.

On the one hand, changing knowledge, attitudes, or behavior is extremely difficult. On the other hand, it is extremely important. There was a time when it seemed that medical advances would solve the problem. Effective prevention serums or effective treatments would eliminate the need to acquaint the public with potential dangers, with warning signs, and with the need for special tests. But the day of the miracle drug is many years away. In the meantime, the National Cancer Institute, the American Cancer Society, health insurance companies, state departments of public health, pharmaceuticals, and other present or potential sponsors, are recognizing that many lives can be saved if the public would utilize what is already known about cancer prevention and cure. Future expenditures and time investments in cancer public communication programs should be based on the importance of the problem rather than the prior guarantee of success.

The acceptance of preventive medicine has been slow in coming. Many insurance carriers still only cover expenses of illness rather than expenses of the prevention of illness. Kaiser Permanente and Health Insurance Plan of Greater New York are nationally known exceptions. Stanford University's arrangement with the Palo Alto Medical Clinic is one of the 'local' exceptions. The national health insurance plan that is most likely to be approved by Congress and to be signed into law will improve preventive care to a certain extent by removing some of the financial burdens associated with tests such as the Pap smear, proctoscoptic examination, breast examination, etc. Even though the present compromise plan uses commercial insurance carriers and reimbursement for services, more people will be able to take advantage of certain cancer tests without having to pay the full cost.

Such changes will make it easier for public communication programs to succeed. Once preventive medical care is an accepted value in this society, once cost of health care is not a prohibitive factor, more individuals will attend to messages about what to do to prevent and treat cancer. However, programs will continue to have to take into account the current knowledge, attitude, and behavior levels as well as

the many intrapersonal factors that influence program results. The next decade can well be spent on action research where public communication programs are evaluated and modified on the basis of outcomes.

SEARCH FOR CANCER PUBLIC COMMUNICATION PROGRAMS

This project reviewed public communication programs on cancer that had been conducted under a large number of auspices. To find these programs we worked with National Cancer Institute, National Clearinghouse on Smoking and Health, American Cancer Society, Regional Medical Programs, State Departments of Public Health, American Medical Association, National Library of Medicine, Schools of Public Health, and many public health educators. These procedures are documented in Appendix B.

SITE SELECTION

All programs located were documented. According to the original plan of the project, four to ten programs were to be described and discussed in case studies. The large number of factors to be considered for site selection, as well as the interest in including several English sites, expanded that number to 15 programs. Site selection criteria were many and diverse (see Appendix B). The sites chosen were:

FEELING GOOD
Children's Television Workshop

CANSCREEN
Fox Chase Center for Cancer and Medical Sciences
and Preventive Medicine Institute

PROJECT HEALTH
G.D. Searle and Company

EMPLOYEE EDUCATION
Philadelphia Department of Public Health
American Cancer Society

SMOKE-CHOKE-CROAK
American Cancer Society

SMOKING RESEARCH/SAN DIEGO
National Clearinghouse on Smoking and Health

YOUTH PATIENT PANEL
American Cancer Society

STEPS IN THE CONQUEST OF CANCER
CANCER QUEST LINE
University of Wisconsin Clinical Cancer Center

CANCER PUBLIC EDUCATION RESEARCH
Manchester Regional Committee on Cancer

CANCER EDUCATION AND INFORMATION
Cancer Information Association

BREAST CANCER SCREENING
Health Insurance Plan of Greater New York

HAVE-A-CHECK
American Cancer Society

CANCER EDUCATION FOR INNER CITY RESIDENTS
American Cancer Society

CERVICAL CANCER SCREENING BY MOBILE VAN
Women's National Cancer Control Campaign

MANAGEMENT OF INTESTINAL STOMAS
Regional Medical Program

Case studies of these 15 programs are presented in Chapter IV. Each of these programs seemed to have achieved some success in reaching the public and to have unique features that others might want to incorporate in the planning of future programs.

Three of the programs are English. We found five themes that summarize the difference in the American and the English programs. These differences exist for a combination of reasons that include historical events, patterns of funding, and media availability. Each country can benefit from the other. However, since the American programs are better known, we would like to emphasize the themes we found in the English programs. First, the English rely on baseline data before planning a program. Second, the English prefer program continuity over time. Third, the English use control communities when possible. This enables them to assess program effects. Fourth, the English use social epidemiological data in choosing target populations and in creating educational materials. And fifth, the English construe the role of the target population as that of "protector of others" rather than as "potential victim". These points can be found to a certain extent in some of the American programs. However, they characterize the English approach to cancer public communication much more than the American approach.

ADDITIONAL PROGRAMS

Our initial search for programs pointed to a set much larger than the number we could reasonably site visit. Rather than ignore these

additional programs, we wrote synopses of them. They can be found in Chapter V. They present an interesting range of ideas and techniques and may be of considerable interest to future program planners. All programs, plus a few not documented in Chapter IV or Chapter V are presented briefly in Appendix A.

RECOMMENDATIONS

In the months of working closely with cancer public communication programs, we developed a series of recommendations. These suggestions will seem obvious to some, unnecessary to others, and impractical to still others. However, we believe they are a first step in helping to make future program efforts more successful in reaching the public with information and education on cancer. The days of 'reaching the reachables' are almost over. We soon will be faced with the need to reach the large number of individuals who do not hear and do not heed the steps necessary for positive health.

1. Program planners and developers need to be more cognizant of the social science research literature. Although the findings from the last 15 years have not been distilled for their applicability to health public communication programs, there are many relevant findings. For instance, much is known about the media use of various audiences (e.g. the disadvantaged, minorities, the aged). Relevant information is also available from market researchers. For instance, they have developed methods for segmenting the audience. To get individuals to screening programs, the techniques of market research should not be overlooked entirely. Although there are significant differences between selling toothpaste and selling good health practices, some of the basic advertising texts may still belong on the bookshelves of public communication planners. For instance, STRATEGY IN ADVERTISING (Bogart, 1967) and MARKETING COMMUNICATION (Crane, 1965) have potentially valuable ideas. Bogart's book discusses such aspects of communication as:

   -- The Concept of "Audience"

   -- Market Segmentation

   -- Persuasion and the Marketing Plan

   -- Understanding Media

   -- Getting the Message Through

   -- Reach versus Frequency

   -- The Uses of Repetition.

Although the public communication planner will have to extract and adapt judiciously, there are certain principles to be applied to reaching the public. We have seen other fields slowly realize that people do not easily accept and utilize new knowledge and practices. Even a field like education is now turning to marketing strategies to get teachers and institutions to adopt new educational practices.

2. Program sponsors and developers should be less intuitive, more empirical in chosing their strategies. Alternative strategies should be pilot tested against each other. This means the research component of the program has to be part of the initial planning, rather than an afterthought. Research has implications for the calendar, the budget, and the staffing of the project. This need for research is elaborated in the five following recommendations.

3. To iterate to better communication programs, planners and developers must first decide on the intended audience. We don't know much about the forces of resistance that cause people to be unaware of warning signs, that keep them out of screening programs, that prevent them from utilizing routine medical care and cancer tests, and that keep them from seeking diagnosis and care when warning signs are recognized. We rarely have information from the perspective of the nonparticipant. We know much more about the "willing recruits." We notice in some programs that women who have had a Pap test in the last year or two are more likely to attend a screening program than women who last had a Pap test more than two years ago or who never had a Pap test. We notice in other programs that rural residents are less likely to utilize information sources than urban dwellers. Programs need to be targeted to specific audiences since the evidence allows us to say that a single message will not effectively reach everyone. Then prior knowledge, attitudes, and behaviors, as well as media use patterns and other factors can be evoked during the early planning and pilot testing phase.

4. The second factor to be included in the planning process is desired outcomes. A typical effort wants the public to know more about the warning signals of cancer or to take preventive tests such as the Pap smear. Specific outcomes are rarely defined. It is infrequent that we know what percentage of which groups are to alter what knowledge, attitude, or behavior. Often the baseline information is missing, so the program outcome may only tell us how many women attended a screening, how many adults visited an exhibit, or how many school children saw a program. What percentage are these of the total possible? What are the characteristics of these participants? What did they know prior to participating in the program? What is their prior use of cancer tests? None of this is known. The planning of desired outcomes requires much specification.

This outcome specification is partially determined by measurability. The Children's Television Workshop (CTW) listed several questions that need to be asked when considering outcomes. They write:

> "What kinds of changes in knowledge and behavior regarding this topic are measurable in ways which will provide a valid indication of the series' effectiveness? How likely are the measures to be costly, require access to confidential records, involve a large field staff, or influence the outcome they are intended to assess?"

Intended outcomes and methods for determining success in reaching these outcomes are important factors. We often learn how many came to a screening, but we rarely know how many others heard the message, but decided not to come, or how many did not even hear the message that would have come, etc. We need to be prepared to measure what happened as well as what didn't happen.

Given limited resources, it is important that outcome measurement include cost variables. Although a cost/benefit analysis is complex, we need to do more in this direction. Some of the relevant issues are discussed in Appendix B.

5. The third factor to be included in the planning process is the context of the program. Trying to reach people in settings where another problem is more salient, may be ineffective. Creating artificial settings for behavior change may be successful in the short-run and unsuccessful in the long run. Wakefield writes that we need to be careful about widespread use of screening programs for companies where mobile vans are brought to the site. Although such efforts seem to have much to commend them as a way of reaching people, he reminds us that unless the program can be repeated each year, most people will not generalize their behavior. Having participated in the screening in one year does not mean the individual will visit a physician the next year for the same tests. Certainly, these ideas need to be tested.

6. The fourth factor to be included in the planning process is the message. Not only do planners need to consider language, length, and complexity, but also they need to consider the efficacy and feasibility of action recommended in the message. Specific questions dealing with the efficacy and feasibility issues have been asked by the CTW staff. They write:

> "Are there actions which an individual can take to prevent or ameliorate the problem? How effective are these actions? Is there controversy regarding their effectiveness? How likely is the individual

> to take the action recommended? If the action costs money, can he afford it? If it requires access to facilities, are the facilities available? Does he distrust or dislike the health care providers? Do people around him oppose taking the kinds of actions recommended? Would taking the action conflict with personal values or self-image? Are the actions recommended painful, boring, inconvenient? Does he think the problem could affect him? Are competing or reinforcing messages from other sources likely to be present?"

The last question asked is important for two reasons. First, it reminds us that a public communication program should not be planned in a vacuum, but in relation to other programs. This may require coordination among several agencies from the national or federal level to the local level. Slogans or specific messages can be carried over from one effort to the next. This type of repetition is often effective as a way of reaching the public. Second, the CTW question is important because it reminds us that different types of messages, all built around the same theme/slogan are needed for programs designed to increase awareness or knowledge, to change attitudes or beliefs, or to alter behavior. Again careful planning should be backed up by evaluation research.

We find that most messages focus on general knowledge about cancer, on prevention, or on screening/ detection. Little effort has been put into messages about alternative treatments of rehabilitation. We are beginning to see some discussion of alternative treatments for breast cancer in both popular and scientific magazines. However, these are one-shot approaches with no follow-through and no research evidence on effectiveness. Programs designed for patients and their families are also infrequent. Rehabilitation information is left to the individual physician and a few volunteer groups. There seems to be a role for print and audiovisual materials so the physician or volunteer can spend time on clarifying information and helping the patient with specific problems, rather than on presenting basic information.

How many times to repeat a particular message or how long to run a particular program is another message-related consideration. Some sponsors have felt it important to change programs and to initiate new efforts regularly. This is done to maintain public interest. We suggest that the longer a program runs, the greater the likelihood that the "information poor", the "unreachables" will learn the information or will participate in the screening. The work by Tichenor and his colleagues, discussed in Chapter III provide the basis for this recommendation. Short programs and one-shot efforts primarily reach those who already possess the knowledge. It seems possible to get public attention from

long-running programs as well as from new or special once only programs. For instance, one car manufacturer was well known for its slogan "We only change it to make it better." New models and new designs on the part of other car manufacturers was cast in the light of adding expense and frills. Reliable and meaningful long-term programs could be highlighted and used for needed publicity by showing how money was being used in tested ways.

7. The fifth factor to be included in the planning process is the medium. There are a variety of media to be included in the decision process. Some decisions may be based on the type of message to be presented. Different types of messages are effectively presented in different media. The planner needs to rely on the social science research literature and the marketing literature that document effective use of different media. This literature needs to be supplemented by original research to determine how effective a particular media is in reaching the designated audience with a specific message.

   There should be use of several media. Often a program relies on one or two approaches and misses opportunities for reinforcing messages or for additional audiences.

   Program planners should try utilizing interpersonal sources as a way of reaching certain audiences. The "each-one teach-one" philosophy can be applied in cancer public communication programs. This is one way to extend the effectiveness of a program. First, the program participant becomes more convinced by making a public commitment when discussing it with a friend or acquaintance. Second, some people can only be reached this way. In the future it will be important to find ways to locate health opinion leaders in neighborhoods and small communities.

8. There should be regularly commissioned large scale surveys to determine knowledge, attitudes and reported behaviors. Presently, the American Cancer Society gathers some data this way. We feel that all interested groups should share in the funding of these studies so they can be done more frequently, and so more groups can help in specifying questions for the surveys. Since this data should serve as baseline data and as national norms for different types of programs, it will be necessary for all sponsors to participate in formulating the kinds of information to be gathered and the funding.

   The data will show changes over the years. Although no single program will be responsible for this change, future programs can be planned around what is generally known/believed/done. Efforts at the local or state level can be more effectively directed when the knowledge/attitudes/behaviors for that area can be compared with national averages.

9. Workshops and seminars of effective strategies for reaching the public should be organized regionally or nationally. Appropriate topics range from setting program objectives, through the nuts-and-bolts of media use, to the psychology of the target audience.

10. Program planners should contribute to a "Guide to Effective Cancer Public Communication Strategies" that is funded by the many sponsors of cancer public communication programs. At a minimum, the guide would contain a section on each outreach strategy, covering the rationale of use, mechanical aspects, costs, and possibly specimen materials on which effectiveness research has been conducted. Interpersonal strategies as well as media strategies would be documented.

FUTURE OF CANCER PUBLIC COMMUNICATION PROGRAMS

As we suggest in Chapter VI, we feel there are two factors that may influence the future of cancer public communication programs. The first of these is new technology. Cable television and communication satellites are a reality. Their use is now limited, but the potential is there. A few years from now we may find it possible to carefully target messages to individual homes. All research we can do now on effective ways of reaching different audiences will be needed at that time.

The second development that can affect future cancer public communication programs is the training and use of social communication engineers. Their role will be that of designing the research that we envision as such a necessary part of the future. These engineers will work toward communication strategies fitted to the needs and dispositions of the target audience. They will combine their research skills with the health educator's knowledge to form a team that plans, carries out, and evaluates programs. Each effort suggesting the next as they work toward effective ways of informing and educating the public about cancer prevention, detection, treatment, and rehabilitation.

CHAPTER II: BACKGROUND ON EFFORTS TO REACH AND INVOLVE THE PUBLIC IN CANCER CONTROL

I. Introduction

Cancer is not a disease new to humanity: traces of it have been found in the bones of Pleistocene mammals, skeletons of dinosaurs of the Mesozoic period, and in an anthropoid unearthed in Java in 1891. Evidence of its presence in humans has been found in Etruscan tombs, Peruvian mummies, and Egyptian mummies from as far back as 2500 B.C. It has been mentioned in ancient writings such as The Ramayana (2500 B.C.), the Edwin Smith Papyrus (3000-2500 B.C.), and the Papyrus Ebers (1500 B.C.).

Hippocrates gave the disease its name, possibly because the large veins sometimes surrounding the cancer site resembled the claws of a crab, or possibly because a removed cancerous growth resembled the shape of a crab. He (and another early physician, Galen) also directed the course of medical thought about cancer for centuries along the lines of his humoral theory of disease. Early cancer treatments advocated in ancient writings included surgery, cautery, and arsenic pastes: advances in the understanding and treatment of cancer were slow until the twentieth century.

It was not until the early 1900's, years before very much was known about cancer, that physicians and educated lay persons recognized the importance of public education about cancer. Treatment methods for cancer still largely consisted of surgery, and experience had shown that this method was usually effective only when used in the early stages of cancer. Given the nature of this situation, it was clear to many physicians at the turn of the century that at least one important way to control cancer would be to educate the public about its warning signs and about the very real possibility of cure if treated soon enough.

In response to this general need to take some active measures against cancer, two early organizations were founded. The American Cancer Society (then called the American Society for the Control of Cancer) was established in 1913 as a voluntary organization supported by public contributions:

> "to collect, collate, and disseminate information concerning the symptoms, diagnosis, treatment, and prevention of cancer; to investigate the conditions under which cancer is found, and to compile statistics in regard thereto."

A second organized effort at cancer control began when the National Cancer Institute was established in 1937, primarily for the purpose of conducting cancer research but also to control cancer through the coordination and dissemination of research findings. These activities, of course, are necessarily complimentary. It is unreasonable to attempt to educate the public about cancer without some knowledge base from which to work. Similarly, it is crucial to

disseminate whatever knowledge we have as widely as possible so that the public will benefit.

A third, more recent organization that was also concerned with public education is the National Clearinghouse on Smoking and Health, which existed from 1966-1974 under the Department of Health, Education, and Welfare. These three organizations have represented key efforts in educating the public about cancer, and are the focus of this history of cancer public education.

II. Establishment of a Private Supported Organization: The American Cancer Society

Bloodgood (1927) writes that "up to 1910, there was no united effort on the part of the medical profession as a whole to instruct the public on the necessity of the earlier intervention in malignant disease." He describes this situation as the result of medical ethics encouraging concealment, although there may have been other reasons since at least one professional society--The American Medical Association--had published leaflets to educate the public before 1910. Some correct information was reaching the public, either through the sporadic efforts of a few medical societies or through face-to-face communication. But not very much of this information had an impact: cancer was seen by most people as a hopeless disease that could not be prevented or cured.

It was in this atmosphere that, in 1912, physicians meeting in Washington during the American Gynecological Society's convention appointed a committee to prepare plans for conducting public cancer education. Following a series of meetings at the home of Dr. Clement Cleveland in New York in 1913, the American Gynecological Society was asked to present the subject before the branches of the Congress of American Physicians and Surgeons that was to meet in Washington later that year. A statement read by Dr. Frederick L. Hoffman on "The Menace of Cancer" recommended that concerted action be taken. A few weeks later, an organizational meeting was held by a group of physicians at the Harvard Club in New York, and the American Society for the Control of Cancer was born.

Beginning with a $10,000 budget of donated funds, the ASCC initiated public education about cancer in several ways: public meetings where medical experts spoke were sponsored, pamphlets on cancer were created and distributed, and contacts with the press were made. Other forms of educational material, such as posters, exhibits, slides, radio talks, and movies were also used to bring the message to the public. The ASCC additionally encouraged and participated in professional education of doctors and nurses, cooperated with various state and county medical societies, attempted to provide cancer patients with services such as transportation, and established clinics in association with the American College of Surgeons to provide facilities for treating and diagnosing cancer. In 1944, the ASCC became the American Cancer Society. In 1946, ACS began to devote a large part of its funds to cancer research. The current division of the American Cancer Society's efforts into public education, professional education, service, and

research had its roots in its early work.

The various programmatic emphasizes are illustrated in the 1973-1974 ACS budget. Of the total $89,633,000, $26,028,400 (29%) is spent on research, $19,742,600 (22%) is spent on service, $15,457,100 (17.2%) is spent on public education, and $9,387,000 (10.5%) is spent on professional education.

Today, ACS has about 2 million volunteers working through the national office in New York City, the 58 chartered divisions, and 2,758 local units. The registered trademark and insignia of ACS is the double-edged blade with twin serpent caduceus forming the hilt. This "Sword of Hope" symbolizes the medical and scientific aspects of the program and has been used for many years in all ACS sponsored activities.

III. The Establishment of Government Supported Organizations: The National Cancer Institute and The National Clearinghouse on Smoking and Health

Although the American Cancer Society had been working toward educating the public and encouraging cancer research, and the Public Health Service had been supporting two cancer research laboratories since 1922, progress against cancer was slow. An aura of gloom and hopelessness still clung to the disease. To combat this climate of opinion and to speed control of cancer, the National Cancer Act of 1937 was passed by Congress establishing the National Cancer Institute. Specifically, the National Cancer Institute was created:

> "...for the purposes of conducting research, investigations, experiments and studies relating to the cause, diagnosis, and treatment of cancer; assisting and fostering similar research activities by other agencies, public and private; and promoting the coordination of all such research and activities and the useful application of their results, with a view to the development and widespread use of the most effective methods, for the prevention, diagnosis, and treatment of cancer." (National Cancer Act, 1937)

The National Cancer Institute set out to accomplish these goals through a series of programs including grants-in-aid for researchers, research fellowships, training in the diagnosis and treatment of cancer, a radium loan program, cancer research (continuation of two programs in existence since 1922), clinical cancer centers, cancer control activities, and a limited public education program in cooperation with the American Cancer Society. These programs form the core of the expanded National Cancer Institute program that we see today, with a continued greater emphasis on cancer research than on public education.

It is the current Division of Cancer Control and Rehabilitation (DCCR) of the National Cancer Institute, first organized as a branch

in the early 1940's, that had cancer public education as one of its goals. It was authorized by Congress to develop and implement a coordinated national effort to reduce cancer incidence, morbidity, and mortality in the United States, and it attempts to accomplish these objectives through the dissemination of existing knowledge about cancer. The Cancer Control Program provides for the education of health professionals and the public, demonstrations to the medical community of new measures now ready for general application, and improved methods of cancer rehabilitation.

The DCCR has three major divisions that work toward these goals -- Supportive Services, Intervention Programs, and Community Activities. Supportive Services has Planning, Evaluation, Resources, Communications, and Liaison Branches. Intervention Programs has Prevention, Detection/Diagnosis/Pretreatment/Evaluation, and Treatment/Rehabilitation/Continuing Care Branches. Community Activities has Community Resources Development and Community Special Projects Branches.

The NCI Cancer Control budget for FY 1974 indicates approximately $3 million is being spent for prevention, $14 million for screening, and $16 million for treatment, rehabilitation, and continuing care. Projections for FY 1980 show that the area of prevention will receive the greatest percentage of increase. In explaining the decision to put more emphasis on prevention, NCI writes:

> "It is generally recognized that prevention, when possible, is the most effective and efficient means of control. This increase will include primarily intensive educational efforts directed at health professionals and selected high-risk population groups. Unless vaccines or similar preventive techniques are developed for the various types of cancers, much of the prevention segment of the program must focus on educational and motivational activities."

The second government agency to be active in cancer public education was the National Clearinghouse on Smoking and Health. It was established in 1966, following the conclusion of the Surgeon General's Advisory Committee that cigarette smoking is a health hazard of sufficient importance to warrant appropriate remedial action. The Clearinghouse attempted to reduce the effects of smoking by causing a reduction in the number of persons who smoke cigarettes, a reduction in the number of young people beginning smoking behaviors, and the encouragement of less hazardous smoking behaviors for those unable to give up smoking. The Education Program of the Clearinghouse (one of five programs) was an extensive information campaign using television, radio, and print materials in cooperation with various outside groups and agencies. The Clearinghouse was discontinued in 1974. Some of its cancer education/information programs are being supported by other agencies.

IV. Strategies and Techniques of Cancer Public Education As Illustrated by Some Major Events in the History of Cancer Public Education

Over the years, various strategies and techniques have been used to educate the public about cancer. A brief description of key events in the chronology of public education history follows. They illustrate the use and intent of the strategies. Figure 1 lists these events together with their dates.

-- 1913 and 1915

Early activities of the American Cancer Society focused on print media -- reaching the public with its message of hope, the need to get early treatment and to avoid "quack" treatments. Articles were published in magazines -- LADIES HOME JOURNAL carried the first attempt at public education in a lay magazine -- and pamphlets and circulars were produced for distribution together with articles published in newspapers by 1915. Public meetings were also held with speeches given by physicians. Cancer public education from its start attempted to reach as many people as possible through the mass media, and to use interpersonal communication as well.

-- 1917-18

This theme is carried over into the Society's initiation of cooperation with the General Federation of Women's Clubs: women participated heavily in the distribution of educational material and supported most of the Society's voluntary activities such as the service program and fund raising.

The years of World War I also mark the beginning of Campaign Notes, a pamphlet suggesting that public education could be treated like a military campaign to be similarly planned and executed. The campaign was carried out by American Cancer Society volunteers, organized into regional committees, and relying on help from local contacts during times of intensive activity. In addition to these various attempts at public education, the Society began it's professional educational efforts with the encouragement of a postgraduate course at Johns Hopkins University. The Society felt the necessity of equipping the profession with the most current knowledge possible about cancer so that physicians and nurses would be able to care for a more educated and responsive public.

-- 1919

The U.S. Government entered the field of cancer education with a 30-page Public Health Service bulletin, demonstrating the growing interest of the government in cancer that was to become more evident in its support of cancer research in 1922. During this period, the American Cancer Society together with the American Medical Association, disseminated a pamphlet, "What We Know About Cancer: A Handbook for the Medical Profession." This joint effort emphasizes the continued cooperation that the Society sought and maintained with the medical profession, and also the importance it placed on the need to educate the medical profession in the early recognition

of carcer.

-- 1920

This year was the first time a "Cancer Week" was held by the American Cancer Society. Cancer weeks subsequently became annual events, and evolved into "Cancer Month" by Presidential Proclamation in 1938. During a Cancer Week, public education became an all out effort, and the support of all media were enlisted to make the public aware of what could be done about cancer. There were also likely to be fund raising drives, free diagnostic and treatment clinics, and series of articles in local media about cancer. The first cancer exhibit at a medical meeting was also presented: a poster series called "The Right Way" and "The Wrong Way" was shown at the meeting of the American Medical Association.

-- 1922

Several permanent clinics to provide facilities for treating and diagnosing cancer were established. Many more were to be supported by the Society in succeeding years. Although the Public Health Service was not active in public education, it began to fund cancer research in two laboratories that eventually became the bases for the National Cancer Institute's cancer research program. The American Cancer Society sponsored its first radio talk and first movie about cancer, and distributed its leaflet "Danger Signals" to all school children in New York. These techniques of public education were used often in later years by the Society.

-- 1926-27

The Lake Mohonk Symposium was the first international conference about cancer to be held in the United States, and it brought together concerned physicians and public educators from all over the world. The Neely Bill, a precursor to the bills that established the National Cancer Institute, was defeated.

-- 1929 and 1931

An intensive campaign against breast and uterine cancer was launched by the American Cancer Society during 1929. This was the first of the site-specific campaigns that have occupied the Society in recent years. It was designed to be a seven-year comprehensive program of education through State and County medical societies. The Society also began publishing the American Journal of Cancer, a continuation and expansion of the Journal of Cancer Research. By this time, the American Cancer Society was using all forms of media extensively in its public education/information activities.

-- 1935

The creation of the Women's Field Army of the Society began in 1935, so that every woman could know about cancer for her own protection. The Women's Field Army formed the core of volunteers that has made the Society's efforts possible. It became the Field

Army of the American Cancer Society in 1944 when the Society changed its name.

-- 1937-38

Three Bills before Congress formed the National Cancer Act of 1937 to establish the National Cancer Institute and thus increase the pace of cancer research and education. April was proclaimed National Cancer Control Month by the President, and the new National Cancer Institute began a limited public education program in cooperation with the American Cancer Society.

-- 1940-46

During World War II, the National Cancer Institute continued its research program and was largely responsible for keeping cancer research going. At the end of the War, the American Cancer Society began to use a large proportion of its funds for cancer research: the Society's budget for cancer research was 60% of the National Cancer Institute's budget between 1946 and 1956. The American Cancer Society began funding cancer research while the National Cancer Institute was undergoing a period of rapid expansion of activity and budget because:

> "It is...very healthy to have more than one source to which scientists can turn with their new ideas. The ACS can do things we cannot do in the federal government. There are certain constraints which exist in government which are relaxed in theprivate sector."

The National Cancer Institute and the American Cancer Society jointly published their first pamphlet on cancer of a specific site (breast), and the Journal of the National Cancer Institute commenced.

-- 1947-57

The National Cancer Institute reorganized into three branches: intramural cancer research, cancer research grants, and cancer control activities. All of the NationalCancer Institute's programs were expanded (except the radium loan program), and several new ones were added.

-- 1960's

The American Cancer Society continued its attacks on cancer of specific sites, now including breast cancer, uterine cancer, colon-rectum cancer, lung cancer, oral cancer, and skin cancer. The National Cancer Institute reorganized to achieve a more effective management of its expanded programs, and the National Clearinghouse on Smoking and Health was founded.

-- 1970's

The National Cancer Act of 1971 waspassed because scientists

felt that our present understanding of cancer had reached a critical point: new scientific leads followed quickly might hasten the adequacy of prevention and therapeutic capabilities. The Act called for the development of a plan that would determine the current status of cancer control, goals for the future, and effective means for reaching those goals. The Cancer Control Program of the National Cancer Institute, whose purpose it is to develop, disseminate and aid in the application of existing knowledge that is of immediate value in combating cancer, was also strengthened.

Figure 1. Strategies and Techniques of Cancer Public Education as Illustrated by Some Major Events in the History of Public Education About Cancer

1913	1915	1917-18	1919
ACS founded; LADIES HOME JOURNAL article	Pamphlets, circulars, public meetings, press articles	CAMPAIGN NOTES; Cooperation with General Federation of Women's Clubs; Postgraduate course for medical profession	PHS bulletin; Free exams; ACS pamphlet to educate medical profession
1920	1922	1926-27	1929
First Cancer Week; First cancer exhibit at medical meeting	Cancer clinics; PHS begins cancer research; First radio talk, movie; Literature distributed to children	Lake Mohonk Symposium; Neely Bill defeated	Intensive ACS campaign against breast and uterine cancer
1931	1935	1937-38	1940-46
AMERICAN JOURNAL OF CANCER; All forms of advertising used	Creation of WFA	National Cancer Act; National Cancer Control Month; ACS-NCI joint pamphlets	NCI war research; ACS begins extensive cancer research; NCI first pamphlet on cancer of a specific site (joint ACS); Journal of NCI
1947-57	1960's	1970's	
NCI reorganizes, expands	ACS specific-site emphasis; NCI reorganizes for effective management; National Clearinghouse on Smoking and Health established	National Cancer Act; ACS expands cancer research budget, service programs	

CHAPTER III. SOCIAL SCIENCE PRINCIPLES OF POTENTIAL VALUE IN PUBLIC COMMUNICATION PROGRAMS

INTRODUCTION

Four major types of messages flow from mass communication media to the public. The types can be characterized either from the sender's perspective in terms of intent or from the receiver's perspective in terms of effect.

From the perspective of the sender, the types are:

1. ENTERTAINMENT. The sender asks for the receiver's attention on the premise, "This message will divert you, amuse you, make you sad, etc." (Examples include episodes from Marcus Welby, M.D., All in the Family, and Medical Center.)

2. INFORMATION. The sender's premise is, "This message contains facts that will help you make decisions, look out for yourself, anticipate future developments, etc." (Examples include the documentary on asbestos workers in Texas, Breast Cancer: Where We Are, and one episode of The Killers.)

3. NEWS. The sender's premise is, "This message concerns something 'newsworthy' that has happened. It is my responsibility to tell you about it, whether or not it entertains you or helps you personally in any way." (Examples include reporting of Betty Ford and Margaretta Rockefeller's breast cancers.)

4. PERSUASION. The sender's premise is, "This message concerns a change that you should make in your beliefs or behavior." (Examples include the many anti-smoking commercials broadcast in the early 1970's.)

The effect of a message on the receiver may or may not be congruent with the sender's intent. A message intended to entertain may have the effect of informing. A message intended to persuade may have the effect of informing, entertaining, etc.

Indeed, in the flow of millions of messages through communication media, senders find it to their advantage to combine message types in the same communication, so that information will appear to be entertainment, or persuasion will appear to be information, etc. Receivers who cannot be reached under one premise are thus reached under another.

Many social institutions assume the role of sender in this process, each for their own reasons. Government agencies seek to explain and justify their activities. According to their mandates (e.g., to improve public health), they may also seek to change public beliefs and behavior. Political parties, lobbies, businesses, and labor unions join government agencies in informing and cajoling the public.

Communication media are themselves the chief producers of news and entertainment messages. They are less concerned than government, business, etc., with "message as content" and more concerned with "message as commodity."

Messages disseminated by "public communication programs" generally combine informative and persuasive intents. Relative proportions of information and persuasion in such messages vary according to public knowledge and public beliefs/behaviors surrounding the topic of concern. Topics of major public communication programs of the present and recent past have included smoking, cancer control, heart disease prevention, automobile safety, environmental protection, energy conservation, consumer economics, drug abuse, civil rights, etc. In addition to these programs, which involve substantial information content, various agencies carry on programs that are essentially devoid of information content and extend over decades as slogan campaigns -- an example is Smokey the Bear's campaign to prevent forest fires.

Early public communication programs were predicated on assumptions of direct mass communication effects on "target audiences." Particularly in the post-World War II period, communication researchers have recognized the minimal role that mass communication media can play by themselves, without reinforcement from interpersonal communication networks, in either informing or persuading the public. An understanding of the complementary roles of mass communication and interpersonal communication sets the stage for an era of "social communication engineering" that can be used to increase public knowledge and utilization of social benefits -- health care, education, vocational opportunity, etc.

OBJECTIVES OF THE NATIONAL CANCER CONTROL PROGRAM

The overall goal of the National Cancer Institute's Cancer Control Program is "to reduce the incidence, disability, suffering, and mortality from cancer" (Hammond and Hilleboe, 1974). This goal is being addressed via five objectives (ibid.):

"PREVENTION, where knowledge of causative factors permits;

SCREENING AND DETECTION, to avoid progression of the disease by finding it in the earliest possible stages;

DIAGNOSIS AND TREATMENT, to accomplish the maximum in cure through the most modern techniques;

REHABILITATION, for those in need of special restorative measures;

CONTINUING CARE, for those who must live with cancer."

Each objective calls for action both from health professionals and from the public. The amount and type of action, the locus of initiative, and aspects of coordination and timing vary considerably, however, from one objective to another.

Some of the action steps that will be required to achieve these objectives were outlined by one of the Cancer Control Program's planning groups (Breslow, 1974):

"PREVENTION;

1. Increase the understanding of the public and health professionals of measures that would reduce the risk of cancer.

2. Motivate people to take steps to reduce the risk, morbidity and mortality of cancer.

SCREENING AND DETECTION;

3. Identify, field test and evaluate screening tests that have the greatest potential for reducing morbidity and mortality.

4. Demonstrate and promote the wide-spread application of practical and effective screening methods.

DIAGNOSIS AND PRETREATMENT EVALUATION;

5. Aid professional groups in the assessment of current practices and in the development of principles for the optimal diagnosis and pretreatment evaluation of cancer.

6. Field test, evaluate, demonstrate and promote measures for the optimal diagnosis and pretreatment evaluation of persons with precancerous or cancerous lesions.

TREATMENT;

7. Promote optimal, comprehensive and continuous treatment and follow-up care for each cancer patient.

REHABILITATION;

8. Identify, field test, evaluate, demonstrate and promote wide-spread application of measures for the optimal rehabilitation of patients.

CONTINUING CARE;

9. Identify, field test, evaluate, demonstrate and promote wide-spread application of methods for the optimal continuing care of patients with recurrent or disseminated cancer."

Scattered throughout the nine action steps are initiatives that should be taken by cancer researchers, clinicians, educators and communicators, and the public. In all initiatives that involve the public, we find that conditions of knowledge, attitude, and behavior are implied. That is, the public should understand, accept, and adopt measures to reduce risk. The public should be aware of, accept, and seek out appropriate opportunities for screening. The public should understand, accept, and cooperate with the requirements of optimal diagnosis, pretreatment evaluation, treatment, rehabilitation and continuing care. Particularly in rehabilitation and continuing care, the public should understand, accept, and carry out many self-care steps.

Thus, in addition to initiatives that researchers and clinicians should undertake, initiatives critical to the success of the Cancer Control Program lie with the public. Generally, the public neither understands, accepts, nor acts upon principles of risk reduction, early detection, prompt and full cooperation with treatment, etc. The role of educators and communicators in the Cancer Control Program is chiefly to affect public knowledge, attitude, and behavior in such a way that cancer control opportunities created by researchers and clinicians are not impeded, but rather facilitated, by the public response to them.

THE ROLE OF COMMUNICATION IN IMPLEMENTING PUBLIC PROGRAMS

Communication is perhaps society's most fundamental process. Other essential processes, from political participation to the distribution of social benefits such as health care and education, depend on channels of communication that are open, free, and managed in the public interest.

Studies of mass and interpersonal communication, as well as the experience of professional communicators, attest to the subtle forces at work in effective communication. Despite any amount of money that may

be spent on communication programs for the public benefit, the line between success and failure in such programs is a narrow one.

The outcomes of any public communication program are mixed. Subgroups of the public respond differently according to factors related to demography, knowledge and attitudes, prior experience, etc. An example of differential effect is provided in a letter to SCIENCE by Schneiderman and Peters of the National Cancer Institute (1972):

> "Substantial progress has been made in preventing cancer. The antismoking campaigns have been much more effective than many people seen to be aware. So much so that if there is anything to the smoking-cancer link, we should soon see declines in lung cancer mortality in white males. From 1965 to 1970, 42 per cent more men and 37 per cent more women became 'former smokers'."

Counterbalancing these successes are the relative failures:

> "However the incidence of lung cancer in women and in blacks is increasing. Too many women smoke; too few are giving it up. At one time the ratio of male to female deaths from lung cancer was nearly 7:1. It is now 4:1, and not because male deaths have declined. The antismoking campaigns have not done as well as we would like among women, and among blacks.
>
> "There is a need for a vigorous, well-directed, antismoking campaign that would appeal to blacks, to women, and to young people."

Why are some programs failures and some successes? Why have "white males" heard the mass media antismoking programs while "women, blacks, and young people" have not heard or have not heeded the persuasive messages? Some answers to these questions lie in the history of communication research.

Precursors of modern communication research were Lippmann, a journalist and "public philosopher," and Lasswell, a political scientist. Lippmann, in writing about "The World Outside and Pictures in Our Heads" (1922), founded a tradition of research in which concepts of "stereotyping" and "imagery" have led to more rigorous theories of "subjective reality." Lasswell's PROPAGANDA TECHNIQUE IN THE WORLD WAR (1927) was a cornerstone of pre-World War II communication theory, in which powerful and immediate effects of communication media on mass audiences were asserted. The "bullet theory" of communication effects introduced the concept of the "target audience;" these military metaphors are a not-accidental consequence of Lasswell's work.

Lazarsfeld, Merton, and their colleagues at Columbia University must be credited with blunting the "bullet theory." In studies of

communication behavior during the 1940 presidential election campaign, the Columbia researchers found little evidence of direct media effects on electoral attitude or behavior. Rather, it seemed that "opinion leaders" were attuned to the mass media and that they in turn influenced others in their social networks, but not necessarily in the directions that mass media were advocating.

The "two-step flow" theory that resulted from the Columbia research has survived in various permutations up to the present time. Research that continued to find direct media effects (e.g., Merton's study of the outcomes of the Kate Smith war bond marathon, 1946), has had to be interpreted in terms of unique aspects of communicator credibility, message appeal, audience readiness to respond, ease of response, etc.

Hyman and Sheatsley published their now-famous article, "Some Reasons Why Information Campaigns Fail," in 1947. The list of points they covered can still be found on the agenda of communication research:

"Chronic 'Know Nothings' in Relation to Information Campaigns;

The Role of Interest in Increasing Exposure;

Selective Exposure Produced by Prior Attitudes;

Selective Interpretation Following Exposure;

Differential Changes in Attitudes after Exposure."

Doubly upset by their egalitarian biases and by the limited success of communication programs that they have planned, communication researchers have been forced to agree with a conclusion drawn by Hyman and Sheatsley: "There is something about the uninformed that makes them harder to reach, no matter what the level or nature of the information."

In post-war communication research we see the "mass audience" concept of earlier research become more subtle and textured. Audience variables of prior knowledge and attitude as well as post-message interpretation become major predictors of attitude and behavior change.

A public education program was undertaken shortly after the Hyman and Sheatsley article appeared. It is now well-known as the Cincinnati Plan for the United Nations (Star and Hughes, 1948). The variable of interest proved crucial in determining why some people paid attention to the campaign while others did not. The authors write:

> "A survey...demonstrated that it is those already interested, even if poorly informed, who will welcome information, while the well informed, if not interested, pay little attention to it, and that the interested also tend to be favorably inclined toward the United Nations. Therefore, the recommendation was

made that the campaign be planned so as to interest certain specified classes which were found to be the most in need of enlightenment. But a second survey made immediately after the campaign disclosed that the materials circulated by the plan, voluminous and ingenious though they were, reached few of these people. The principle derived from the experiment is that information, to be disseminated at all, must be functional, that is, interesting to the ordinary man because he has been made to see that it impinges upon his own affairs."

Three major studies published by the mid-1950's pointed to the next direction for communication research. Katz and Menzel, in a study of the diffusion of a new drug among physicians in four cities (1955), expanded the "two-step flow" theory to any number of steps or nodes in the progress of a message through a social network. Rogers and Shoemaker state a current view of the "multi-step flow" theory (1972):

"It does not call for any particular number of steps nor does it specify that the message must emanate from a source by mass media channels. This model suggests that there are a variable number of relays in the communication flow from a source to a large audience. Some members will obtain the message directly through channels from the source, while others may be several times removed from the message origin. The exact number of steps in this process depends on the intent of the source, the availability of mass media and the extent of audience exposure, the nature of the message, and salience of the message to the receiving audience."

Zimmerman and Bauer (1956) reported on "The Effects of an Audience on What is Remembered." Their work indicated that audiences remember message elements selectively, at least partly in accord with what they perceive to be interesting and acceptable information for audiences to whom they in turn will serve as communicators in the multi-step flow.

The third work indicative of future directions was that of Cartwright (1951). His research, now the basis of a major public communication program in three California communities (the SCOR heart disease prevention program coordinated by Stanford University), integrated concepts of media presentation and concepts of small group dynamics.

Meanwhile, Hovland, after leaving the War Department's Information and Education Division, had established an attitude research laboratory at Yale. There he and his colleagues studied communicator, message, context, and audience variables under controlled conditions, achieving results so different from those of field studies that he found it necessary to address the difficult problem of "Reconciling Conflicting Results Derived from Experimental and Survey Studies of Attitude Change"

(1959), emphasizing personal and social factors that are dominant in field settings but largely suppressed in the laboratory.

Communication research in the 1960's was strongly influenced by two statements. Klapper's THE EFFECTS OF MASS COMMUNICATION (1962) argued that the role of mass media was chiefly to reinforce attitudes and behavior patterns that the social network was initially responsible for creating. Klapper explored the limited circumstances in which mass media might change attitudes and behavior in themselves.

Bauer's "The Obstinate Audience" (1964) summarized conclusions of persuasion research that were, in most cases, antitheses of the "bullet theory" of thirty years before. In a debunking vein, he reanalyzed data from the Kate Smith war bond marathon and wrote:

> "I have made some computations on the famous Kate Smith war bond marathon, which elicited $39 million in pledges. Kate Smith moved apparently a maximum of 4 per cent of her audience to pledge to buy bonds; the more realistic figure may be 2 percent."

Katz and Menzel, Klapper, and Bauer tell us something about how information moves from a source into the public sector. However, they do not tell us, aside from inefficiency in the system, why so many people know so little about health issues. The generally low level of public knowledge has been documented in several sources. Schramm and Wade (1967) reanalyzed the findings of 35 large national sample surveys that reflect what American adults knew about several health items from 1940 to 1964. Here are some results:

-- percentage able to name one or more symptoms of cancer increased from 38% in 1940 to 68% in 1955

-- percentage correctly responding that cancer is not contagious rose from 70% in 1950 to 75% in 1955

-- percentage able to name one or more symptoms of polio increased from 69% in 1955 to 71% in 1958

-- percentage able to name one or more symptoms of diabetes increased from 48% in 1955 to 50% in 1958

-- 93% had heard of a polio vaccine in 1957

-- 48% had heard of tranquilizers in 1957

-- 33% could name one medicine produced from animals in 1948

-- 8% could name four or more symptoms of cancer, 14% could name three, 21% could name two, and 19% could name only one in 1955.

Going beyond simple frequencies, Schramm and Wade did secondary analyses of the data in which answers were divided by demographic levels. General findings about the relationship between demographics and knowledge include:

-- knowledge goes up with education, income, and occupational status

-- knowledge goes down with age (after the early adult years)

-- women know more about health than men.

With the education predictor considered individually, the authors found the following results:

-- percentage able to name one or more symptoms of cancer increases from 42% of those with less than a high school education to 83% of those with at least some college education (1955)

-- percentage responding correctly that it is not possible to catch diabetes from someone increases from 72% of those with less than a high school education to 90% of those with at least some college education (1955)

-- percentage knowledgeable about tranquilizers increases from 25% of those with less than a high school education to 78% of those with at least some college education (1957).

With the occupation predictor considered individually, the authors found the following results:

-- percentage responding that it is not possible to catch cancer from someone else increases from 65% among farmers to 86% among professionals and managers (1955)

-- percentage able to provide specific information about the polio vaccine increases from 25% among farmers to 60% among professionals and managers (1957).

In a summary analysis that holds the effects of age, education, and sex constant, Schramm and Wade show the percentage of respondents having minimum (defined as knowledge of only one symptom) or maximum (defined as knowledge of four or more symptoms) information about cancer and polio symptoms.

		AGE			EDUC			SEX	
		20-39	40-59	60+	-HS	HS	COL	M	F
Cancer symp (1955)	MIN (1)	19	19	20	18	20	19	21	18
	MAX (4+)	9	11	7	3	10	14	5	11
Polio symp (1955)	MIN (1)	12	12	14	13	12	12	15	10
	MAX (4+)	23	15	5	7	19	30	10	23

The authors conclude that the figures on minimum knowledge show little difference between demographic groups and probably represent a basic penetration of the mass media. The higher and more differentiated figures on maximum knowledge indicate special initiatives, unusual patterns of media use, and development of the life space in that subject area.

One of the most current studies of public information on cancer is the Louis Harris poll commissioned by the Blue Cross Association (1972). The findings show a great deal of overconfidence in knowledge about cancer. Overconfidence is another variable that may help to explain the lack of success in information programs. Here are some of the results:

-- 65% thought they could recognize the signs of cancer

-- 30% of these 65% could not name one of the seven signs

-- 17% could name only one sign

-- 40% could name two or three signs

-- 13% could name four or more signs.

The findings also reemphasize the results of the earlier studies in which age, sex, and education were key variables in explaining

differential amounts of knowledge.

Schramm says about the early years of communication research that (1971):

> "...the most dramatic change in general communication theory during the last forty years has been the gradual abandonment of the idea of a passive audience, and its replacement by the concept of a highly active, highly selective audience, manipulating rather than being manipulated by a message -- a full partner in the communication process.
>
> "To appreciate the magnitude of this change, one must recall how frightening World War I propaganda and later Communist and Nazi propaganda, were to many people. At that time, the audience was typically thought of as a sitting target; if a communicator could hit it, he would affect it. This became especially frightening because of the reach of the new mass media. The unsophisticated viewpoint was that if a person could be reached by the insidious forces of propaganda carried by the mighty power of the mass media, he could be changed and converted and controlled. So propaganda became a hate word, the media came to be regarded fearfully, and laws were passed and actions taken to protect 'defenseless' people against 'irresistible' communication."

The early 1970's bring signs of a balanced view that reject both the "powerful media" and "obstinate audience" alternatives. Careful research reviews of the late 1960's (e.g., Sears and Freedman on selective exposure to communication, 1967; Higbee on fear arousal messages, 1969) showed configurations of interacting factors from which different effects on attitude and behavior might be predicted.

Tichenor and his colleagues (1970) conducted a study that helps to bridge the relationship between knowledge diffusion and attitude diffusion. They hypothesize that increasing the flow of information on a topic leads to a greater likelihood of a belief existing about that topic among the more highly educated segments of society. Of particular interest is the authors' reanalysis of data from national surveys in which the same questions were repeated over time. The data are presented as time series correlations between amount of education and agreement with stated attitude. The pattern of correlations between these two variables for the item about the belief that cigarettes cause lung cancer is as follows:

- a correlation of .05 in 1954 between education and attitude (concurrent with release of AMA report on the possible link between smoking and cancer)

-- a correlation of .08 in 1957 between education and attitude

-- a correlation of .13 in 1969 between education and attitude (after the widespread publicity created by the release of the Surgeon General's report on Smoking and Health).

An important conclusion of this research is that although the evidence from several studies supports the knowledge/attitude gap hypothesis, there are ways of closing the communication gap. Usually information or education programs stop at the point where the first level of impact has been made, usually among the better educated. Programs that are extended in time have a better chance of closing rather than widening the knowledge/attitude gap.

Symptomatic of the current balanced view of the communication process is Mendelsohn's 26-year sequel to Hyman and Sheatsley, entitled "Some Reasons Why Information Campaigns Can Succeed" (1973). Mendelsohn criticized previous research that evaluated public communication programs in which no research-derived principles contributed to strategy or content. He argued that teams of researchers and communicators can plan and execute successful communication programs as long as:

1. "they are planned around the assumption that most of the public to which they will be addressed will be either only mildly interested or not at all interested in what is communicated.

2. "middle-range goals which can be reasonably achieved as a consequence of exposure are set as specific objectives.

3. "careful consideration is given to delineating specific targets in terms of their demographic and psychological attributes, their life-styles, value and belief systems, and mass media habits."

Mendelsohn's success stories include the CBS National Drivers Test, a short film entitled "A Snort History" and a "65-installment Chicano information-giving soap opera series" designed for the Los Angeles area.

The 1970's are proving to be a decade in which earlier predictions of media effect are being borne out, in limited but useful ways, by communication programs that are designed "from the ground up" on the basis of research-derived principles. For example, in the Heart Disease Prevention Program coordinated by Stanford, the researchers have established three communication conditions in three California communities. One community receives specially designed mass media messages only. These messages emphasize smoking reduction, exercise, dietary changes, etc. The second community receives the same mass media

messages, but, in addition, small groups of high risk males have been formed. They meet with speakers and consultants who help them understand the effects of diet, exercise, and smoking on their health. The third community, serving as the control, gets neither the specially designed media campaign nor the small groups. Results from the first year show a continuum of effects across the three communities with the control group showing some changes, primarily in the area of smoking reduction, the media-only community showing greater changes, and the media-small group community registering quite significant changes.

Gilroy is the media-only community, Watsonville is the media-plus-small-group community, and Tracy is the control community. Results from the first year show a reduction of 2.5% in the cholesterol level in Watsonville, compared with increases in the cholesterol level of Gilroy participants of .6%, and 3.1% in Tracy. Levels of triglyceride were reduced by 4.9% in Watsonville, but increased 5.5% in Gilroy and 16 per cent in Tracy. Blood pressure of participants in Watsonville was reduced by 1.6%, and by 2.7% in Gilroy, compared with an increase of 4% in Tracy.

Of particular interest for cancer control programs is the result for changes in smoking behavior. Respondents in Watsonville reported that they smoked 31% less cigarettes after the one-year campaign. Gilroy subjects reported a 9% reduction in smoking, and Tracy reported a 4% reduction.

A recent press release announces:

> "Besides the physiological changes, results also confirm the researchers' hunch that changes in knowledge and behavior are possible. For example, more than 15% increase in knowledge that smoking was a risk factor was reported in Watsonville, compared with less than 10% change in that knowledge in Gilroy, and no change in Tracy.
>
> Preliminary results are encouraging. The statistics are significant showing that substantive changes can be effected by an intensive media and instructional campaign."

The past forty years have taught us much about the use of mass media to inform and persuade. We have seen cases in which the media failed to help in the implementation of public programs and we have seen cases in which the media were quite effective. We now realize that more factors interact in determining the success of mass media programs than previous studies have encompassed.

THE HIERARCHY OF COMMUNICATION EFFECTS

Behavioral researchers distinguish among the effects of messages on knowledge, attitude and behavior. It is clear from half a century of

communication research (beginning with Lippmann, 1922, and Lasswell, 1927) that these components of response, as they may be called, are differently affected by communication events that differ in source, channel (medium), message content, etc. However, principles of differential effect and relationships among response components are far from clear.

Characteristics of communication events interact with characteristics of audiences to strengthen or diminish their effects on knowledge, attitude and behavior. Channel differences (e.g., interpersonal channels, print media, electronic media) are related to exposure probabilities for different audiences. Sources regarded as credible for new knowledge may not be credible for new attitudes or behaviors. Sources credible to one audience may not be credible to another.

The sequence of responses to communication -- for example, whether behavior change is preceded by attitude change and attitude change by knowledge change -- is much debated by behavioral researchers. If a single sequence of responses, such as the common-sensical sequence of knowledge --- attitude --- behavior, always occurs, then a program can concentrate on addressing the first-occurring response component first, etc.

However, other plausible sequences of responses can be argued. From the perspective of dissonance theory (cf. McGuire, 1969), if behavior change can be induced for its own sake, then attitude and finally knowledge will change to become more consistent with the new behavior. An important variable in the dissonance-theory sequence of behavior --- attitude --- knowledge is each person's perceived latitude to comply or not to comply with the suggested behavior change. If the person perceives no alternative to compliance, then she or he will suffer no "cognitive dissonance" and require no compensating change in attitudes and knowledge. However, if the person perceives that compliance was freely chosen, then "cognitive dissonance" will trouble her or him to the extent that the new behavior is discrepant with behavior that would have been predicted from previously held attitudes and knowledge.

Conditions under which each of these effect sequences is likely to occur are explored in an important comparative analysis by Ray (1973). He introduces, in fact, a third sequence, knowledge --- behavior --- attitude, as the probable outcome of Krugman's "learning without involvement" theory (1965).

THE CONSTELLATORY NATURE OF COMMUNICATION EFFECTS

Mentalistic psychology, driven almost underground half a century ago by behaviorism, shows new vigor in its applicability and adaptability to problems of psychosocial effect in complex, large-scale, field-based public communication programs. Nurtured by clinical

psychologists, the mentalistic school offers relevant perspectives on motivation and affect. Nurtured by phenomenologists, the mentalistic school offers relevant perspectives on "pictures in the head" or "images" that, far more than demographic differences, divide the mass audience into individuals who receive different messages from the outside world according to their prior experiences and/or combine messages in new mental composites that are uniquely (that is, phenomenologically) their own.

In the age of electronic media, "image" has come to mean a prepackaging or staging of impressions, a play upon audience pride or prejudice. In fact, however, the image has a more basic role in perception and cognition than advertising agencies and public relations firms conceive of. Before there were media, there were images of people, places, times. Then, as now, a person's mental life consisted primarily of images.

In his landmark study, THE IMAGE (1956), Boulding writes:

> "As I sit at my desk, I know where I am. I see before me a window; beyond that some trees ... the roof tops which mark the town of Palo Alto ... the bare golden hills of the Hamilton Range. I know, however, more than I see. Behind me, although I am not looking in that direction, I know there is a window ... beyond that the Coast Range ... the Pacific Ocean. Looking ahead of me again, I know that beyond the mountains that close my present horizon there is a broad valley; beyond that a higher range of mountains...."

After continuing to describe his sense of orientation in space, time, and personal relations and the world of nature, Boulding states:

> "What I have been talking about is knowledge. Knowledge, perhaps, is not a good word for this. Perhaps one would rather say my 'Image' of the world. Knowledge has an implication of validity, of truth. What I am talking about is what I believe to be true; my subjective knowledge. It is this Image that largely governs my behavior."

Boulding's "image" was the basis for a theoretical book by Miller, Galanter and Pribram, PLANS AND THE STRUCTURE OF BEHAVIOR (1960), that deals more with behavior sequences than with percepts or cognitions. The "plan" postulated by Miller and his colleagues has been formed from images, but it contains a dynamic or frankly purposive element that shapes a person's behavior ("purpose" was perhaps the mentalistic variable most often criticized by behaviorists). It is a small step from Miller's abstract "plan" to the "life management plan" that researchers now begin to recognize as an organizing principle behind the statements and behaviors of respondents in field studies.

Although it undoubtedly contains knowledge, attitude, and behavior elements, an individual's "life management plan" owes more to her or his images, or subjective reality, than to these perhaps artificially distinguished constructs. Basic psychosocial research is needed on the question of whether knowledge, attitude and behavior have independent status as communication effects, or whether they represent inseparable aspects of a person's global image of himself or herself, other persons, space, time, nature, logic and causality, etc. that we are increasingly disposed to call the "life management plan."

If it is found that communication effects are more "constellatory" than separate, then the question of sequence becomes moot and empirical conditions under which one or another sequence seems to have occurred become conditions for eliciting one or another facet of an integral but partly hidden constellation.

FACTORING THE PREDICTORS OF EFFECT IN COMMUNICATION PROGRAMS

Figure 1 synthesizes some of the intrapersonal factors that communication research and basic psychological research reveal as important predictors of message effect. Because a person's early experience continuously interacts with later experience to form a periphery of the self. School, church, family, work, peers, and other socialization influences form the person's first and continuing "social construction of reality" (cf. Berger and Luckmann, 1966). Media are a lifelong socialization influence; with the rise of audiovisual media, audiences are shown explicitly how to react to an enormous variety of situations, including, for example, suspected illness and diagnosed illness.

Surrounding the person are factors from her or his past or present that filter incoming messages and shape the image that the person will retain from them. In this illustration, it is not important that these particular factors are the most significant set. Rather, all such factors are theoretical constructs; they belong to the mind of the researcher, not necessarily the mind of the person. They have only heuristic value -- that is, by taking account of them, it may be possible to devise more effective public communication programs.

Additional factors reside in the social environment surrounding the person and in the information environment of sources, channels and messages. Adopting the perspective of most public communication programs -- that is, quite far away from individual members of the "target audience" both in psychological and physical terms -- we can see why communication effects are elusive and unpredictable. From the time

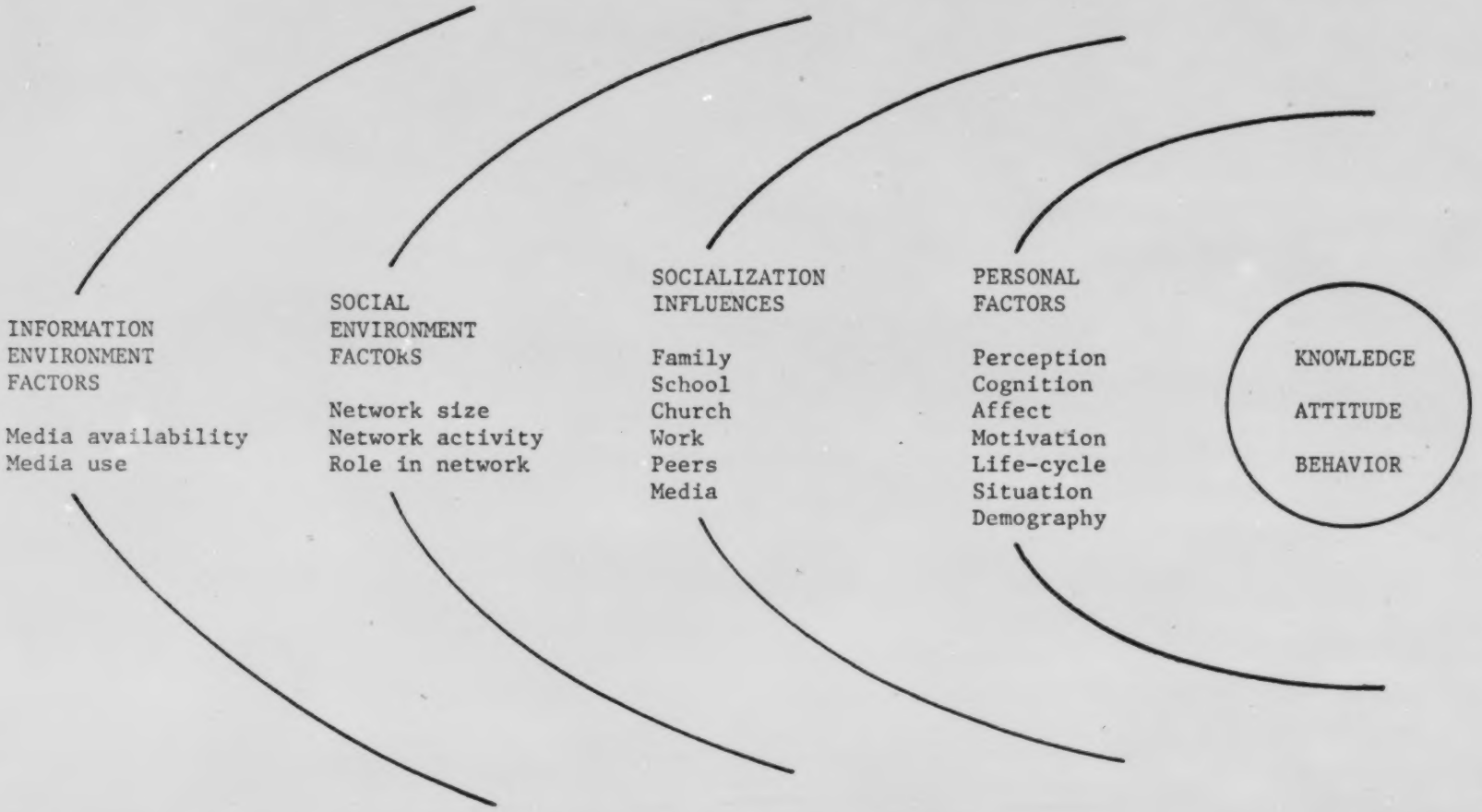
it is born as a concept within the communication program to the time it modifies a person's image in such a way as to produce desired outcomes, the message may have travelled over several networks and through many phases of transformation, some of them external to the person, the others internal.

THE APPLICATION OF SOCIAL SCIENCE PRINCIPLES IN CANCER PUBLIC COMMUNICATION PROGRAMS

In researching the many cancer public communication programs that have been conducted in the United States and in England, we found some use of the principles and empirical findings of social science. However, we found much more reliance on "folk wisdom" about best ways of reaching the public. For various reasons, social science principles have not been transferred effectively from the research settings in which they originated (for example, public opinion, electoral behavior, marketing and advertising research) to the field of cancer public communication.

The following chapter presents 15 case studies of interesting and well conducted cancer public communication programs. We hope that, by reviewing both social science principles and these 15 exemplary programs, we can encourage the planners of future cancer public communication programs to draw upon the strengths of each kind of "wisdom."

FIGURE 1: KNOWLEDGE, ATTITUDE, AND BEHAVIOR ARE CREATED AND REINFORCED THROUGH THE INTERACTION OF PERSONAL FACTORS (PAST AND PRESENT), SOCIAL ENVIRONMENT FACTORS, AND INFORMATION ENVIRONMENT FACTORS.



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CHAPTER IV: CASE STUDIES OF CANCER PUBLIC COMMUNICATION PROGRAMS

On the basis of information contained in the documentation of cancer public communication programs, 15 programs were chosen for site visits, with the expectation that a close look at each program would bring to light additional factors that would make these programs more replicable by others. Programs were chosen to represent a range of cancer sites, education content, communication modes, target audiences, and change goals. In the list of case studies below, the first ten emphasize prevention or general education, the next four emphasize screening or detection, and the last one emphasizes rehabilitation.

FEELING GOOD
Children's Television Workshop

CANSCREEN
Fox Chase Center for Cancer and Medical Sciences
and Preventive Medicine Institute

PROJECT HEALTH
G.D. Searle and Company

EMPLOYEE EDUCATION
Philadelphia Department of Public Health
American Cancer Society

SMOKE-CHOKE-CROAK
American Cancer Society

SMOKING RESEARCH/SAN DIEGO
National Clearinghouse on Smoking and Health

YOUTH PATIENT PANEL
American Cancer Society

STEPS IN THE CONQUEST OF CANCER
CANCER QUEST LINE
University of Wisconsin Clinical Cancer Center

CANCER PUBLIC EDUCATION RESEARCH
Manchester Regional Committee on Cancer

CANCER EDUCATION AND INFORMATION
Cancer Information Association

BREAST CANCER SCREENING
Health Insurance Plan of Greater New York

HAVE-A-CHECK
American Cancer Society

CANCER EDUCATION FOR INNER CITY RESIDENTS
American Cancer Society

CERVICAL CANCER SCREENING BY MOBILE VAN
Women's National Cancer Control Campaign

MANAGEMENT OF INTESTINAL STOMAS
Regional Medical Program

The case studies that follow were made possible by the gracious hospitality and cooperation of project staff members, one of whom is listed at the end of each case study.

PROGRAMS EMPHASIZING PREVENTION OR GENERAL EDUCATION

FEELING GOOD
Children's Television Workshop
New York, New York

PROJECT DESCRIPTION

> "It's what you do, hour by hour, and day by day, that largely determines whether you get sick, what you get sick with, and perhaps when you die."
> Doctor's statement to Children's Television Workshop staff

FEELING GOOD, the Children's Television Workshop (CTW) family health series began broadcasting weekly over 250 public stations in November of 1974. The twenty-six hour long programs are scheduled for prime time. Topics such as cancer, nutrition, mental health, and child care are dealt with in the series.

Extensive research was conducted for a year and a half before the first test material was produced in August of 1973. One hundred and seventy health professionals were interviewed to identify health topics that they thought should be explored in the series. They pointed out that since no two families in the U.S. practice the same kind of health care, varying attitudes and beliefs should be taken into account when writing the programs. They also recommended that the emphasis in the series be on self-help and community assistance in order to best raise the level of the people's health.

Later, a series of meetings took place that narrowed the health topics down to several major areas. An advisory group was appointed for each area. Cancer is a priority topic included under the heading of Chronic Diseases. The CTW staff used several dimensions in chosing topics for inclusion. They felt the problem had to be important, recommended actions had to be efficacious, recommended actions had to be feasible for the majority of the audience, and recommended changes in knowledge and behavior had to be measurable.

In each of the areas (cancer, child care, etc.), the focus was on prevention. There are nine behavioral goals for the cancer segments of the program. These are stipulated as:

1. "motivate women to ask a nurse or doctor to teach them how to do a breast self-examination.

2. motivate viewers to encourage others (friend, spouse, etc.) to perform breast self-examination.

3. To motivate physicians to teach their female patients how to do a breast self-examination.

4. motivate physicians to encourage their female patients to do a BSE monthly.

5. motivate women to do a monthly BSE.

6. motivate women to have a Pap test.

7. motivate viewers to encourage others (friend, spouse, etc.) to have a Pap test.

8. motivate viewers (over age 40) to have a proctoscopic examination.

9. motivate viewers to encourage others (friend, spouse, etc.) to have a proctoscopic examination."

The information goals of these segments were to inform viewers:

1. "that BSE should be done monthly.

2. that 65-80% of lumps detected in this manner are not malignant.

3. that early detection of malignancies greatly increases the likelihood of successful treatment.

4. that the proctoscopic examination is the best means of early detection of colon-rectum cancer.

5. that the benefit of the proctoscopic examination far outweighs the discomfort.

6. where they can obtain diagnostic tests for cancer in their communities.

7. where they can obtain additional information about cancer.

8. that many types of cancer are curable or controllable.

9. that cancer is not one disease, but many different diseases with different symptoms and different possibilities of cure.

10. that there are 1 1/2 million people who have been cured of cancer."

PROJECT ORGANIZATION

In the original plan, the series consisted of twenty-six one hour shows that were scheduled for broadcast at 8:00 PM on Wednesday nights starting November 20, 1974. Results of early audience analysis led CTW to interrupt the series after the first eleven programs. The series will be reformatted into 13 half-hour shows that will be more serious in tone and will contain more information. These will begin showing in April, 1975. Each show will be rerun at least once during the week in which it is initially shown. The entire series may be rerun at a later date.

Each new show will deal with a single health topic. Audience appeal was a major consideration when the programs were written and produced. One of the main objectives of the original series was to hold audience attention through segments or topics in which they may have little interest.

It is felt that much of the success of SESAME STREET and THE ELECTRIC COMPANY was due to the promotional and educational efforts of CTW. The FEELING GOOD series is being promoted in similar ways, building on what has already been learned about working with various agencies and organizations. The CTW staff (of the Community Education Services Division) has worked to involve both health and non-health related organizations at the national, regional, and local levels.

Local stations are encouraged both to promote the series and to help it meet the health needs of the community. At specific times in the program, stations can show listings of available health services and free clinics in the area. Some local stations are doing follow-up shows on the topics presented each week. These are designed to help reinforce the health material.

KQED, San Francisco's public television station, initiated a Community Outreach Project that has established an information and referral telephone service in each of the nine Bay Area counties. Volunteers who will handle the calls have been trained in the techniques of listening, asking the right questions, making referrals, and determining their success. The Outreach Project is being evaluated separately from the overall FEELING GOOD evaluation. KQED's efforts represent the type of "localizing" that CTW staff think is important.

PARTICIPANTS

The one hundred and seventy health professionals brought in by the CTW staff as advisors came from all over the nation. They were employed in a variety of areas: public health, psychiatry, medicine, voluntary agencies, Department of Health, Education, and Welfare. The great majority were M.D.'s and Ph.D.'s from a variety of fields of medicine.

The show is aimed at families. Concerted efforts are being made to reach lower-income groups and minorities since CTW realizes that the viewers of educational television are a self-selected subset of the population. Some of the materials and promotional items are printed in Spanish. There is also hope that the lower-income populations can be contacted through the community services division of CTW. This will include coordination with local agencies, community health services and previously recognized groups such as the viewers of SESAME STREET and THE ELECTRIC COMPANY.

The show tries to get viewers to think of themselves as opinion leaders in the area of health matters. They are encouraged to get the program's message to their children, neighbors, etc. The CTW staff believes that if they could get the small core of regular watchers to take the program content outside the television room, the series would become more meaningful for the viewer and would greatly extend the potential for impact on non-viewers.

MATERIALS

Promotional activities, aside from announcements to the press and the National Association of Educational Broadcasters, include a special informational brochure sent to medical and health officials and congresspersons, a newsletter mailed periodically to health professionals, flyers distributed to community organizations (church, youth, etc.), and a series of informational posters prepared for schools and other organizations.

The CTW staff is exploring two other possibilities. One is launching foreign language simulcasts of the health series on local AM and FM radio stations. The second is to reorganize into one program, clusters from several shows that relate to a single health topic. These repackaged programs could be used by schools, health educators, hospitals, etc.

OUTCOMES

The eventual statement of outcomes is probably a year away. However, data from the first two months indicates that each program was viewed by more than a million people. Shortly there will be data on the success of the new half-hour format. Knowledge, attitude, and behavior change are being assessed, but no results are available yet.

EVALUATION METHODOLOGY

The CTW is particularly known for its ability to research its innovative communication programming. The FEELING GOOD series has been evaluated both in its formative stages (formative evaluation) and after it has been aired (summative evaluation). The formative evaluation focused on types of appeal, credibility of specific segments, and

potential for producing change in knowledge, attitude, and behavior. In particular, the researchers were interested in:

> "Which types of TV presentations hold the most appeal and which are the least appealing?
>
> Which TV forms (humor, music, drama, etc.) can best be used to present which health topics?
>
> Can viewers identify with characters very different from themselves? Does identification increase learning?
>
> In what ways can music and song be used to convey factual health material?
>
> How can light and entertaining elements be used without losing credibility of the messages?
>
> What is the best balance between entertainment and serious treatment of content?
>
> Do viewers change their behavior as the result of watching TV health messages."

The formative research has included a variety of respondent characteristics, test cities, settings for viewing materials, and methods of data collection. The large number of variations for each category have been designed to increase the generalizability of findings. For instance, methods of data collection include individual interviews, group interviews, self-completed questionnaires, and the program analyzer to determine reactions to program sequences.

Several research designs will be used in the summative evaluation phase. Any single design has strengths and weaknesses. By including several, the CTW staff hopes to compensate for any particular weakness that would limit acceptance of measured outcomes. The various research projects can be described as follows:

1. VOLUNTARY VIEWING. In four widely-separated cities with public television stations that broadcast on VHF, Response Analysis Corporation is conducting a study that includes multiple comparisons of viewers and non-viewers during the course of the series. Prior to the actual study, a brief telephone interview with 22,000 adults provided data for selecting three sample groups varying by estimated likelihood of viewing the series. For efficiency, all respondents in the 'high likelihood' category were included in later data collection, and a random selection of respondents in the 'moderate' and 'low' categories was made for comparison

purposes. About 5,000 people in the respondent pool were asked a series of questions prior to the series to provide baseline data on health beliefs, attitudes, behavior; the same questions were used with 2,000 others serving as a control group. Five interim measures are being obtained (by mailed questionnaires, 10% of which will be verified by interviews) as the series progresses, each with an independent subgroup of respondents chosen randomly from the 5,000 who provided baseline data. Each interim questionnaire includes items on the content of the proceding four programs as well as the core questions used on the pre-measure that will be repeated on the post-measure. The design includes a separate panel-effects control group to assess the effects of the baseline and interim measures.

2. INDUCED VIEWING. In one area of a large southwestern city, the National Opinion Research Center is carrying out an experiment to ascertain the effects of viewing most of the shows in the series. Quota sampling was used to obtain a pool of potential respondents who were randomly assigned to treatment or control conditions. Half of the net 200 people in each group are members of minority groups and half have a child under six years of age. All respondents are women, and a majority have family incomes of less than $7,500 a year. Respondents in the treatment and control groups were given a personal interview shortly before the series began. Those in the treatment group are being interviewed (by telephone or in person) three times during the course of the series and once after it ends; those in the control group have been randomly assigned to subgroups that differ with respect to whether and when they are interviewed before, during, and after the series. The study design makes it possible to rule out self-selection bias that limits the value of many studies of mass communications effects. The interviews cover some general health-related attitudes and values as well as specific areas of knowledge and behavior dealth within the series.

3. COMMUNITY MONITORING. The National Opinion Research Center is also responsible for this project, which is being carried out in one area of the city used in the Induced Viewing Study. Data are being collected on health care providers in the community in order to measure the extent to which utilization of facilities is affected by the television series and activities related to it. Possible changes in the institutions themselves, such as extending hours or providing new series, are being monitored by an NORC field supervisor during the course of the series. One value of this project is that it will provide a means of validating the self-report data on health behaviors (at least those involving use of the health care delivery system) obtained in two other studies done as part of the total evaluation plan.

4. NATIONAL AUDIENCE REACTIONS. Four national personal-interview surveys are being conducted by The Gallup Organization to provide an additional measure of self-reported viewing as well as awareness of the series among non-viewers, sources of information about the series, and self-reported preventive health behaviors. The use of independent but similar samples (N=1500 each) for the four waves of data collection permits the tracking of changes on each of these dimensions, and the findings produced will aid in interpreting the results of the limited-site studies described above. Additional questions dealing with the content of particular shows in the series may be asked on the last two waves. The first two surveys were conducted in December and February, and the last two are scheduled for April and May.

5. NATIONAL AUDIENCE ESTIMATES. The size and characteristics of the audience viewing the series are being ascertained by the A.C. Nielsen Company. Nielsen's standard national sample of homes equipped with an Audimeter (N=1200) is supplemented with a separate national sample of adults who maintain viewing diaries. The combined data provide estimates of total audience and breakdowns by age, sex, income, and education. In addition to estimates of the national single-program and cumulative audience, more detailed reports will be obtained on approximately 30 market areas.

FUTURE ACTIVITIES

The program covers two years of development and production and one year of actual broadcast (1974-75). To increase the cumulative impact of the series, there are plans to rerun it during the fall of 1975. A new series of 13 additional half-hour programs may be produced for broadcast early in 1976.

SUMMARY OF PROGRAM

EMPHASIS

Cancer sites such as breast, uterine, and colon-rectum will be emphasized in this television series on health. The plan is to stress the preventive aspects, rather than the remedial ones, of cancer.

COVERAGE

National

MEDIUM

Television

COSTS

The first three years (two years preparation and one year of broadcast) are budgeted at $6.5 million. Approximately $300,000 is being spent for outside evaluation. The evaluation contracts have gone to four companies, A.C. Nielsen, The Gallup Organization, National Opinion Research Center, and Response Analysis Corporation. Most of the expenses for the program have been underwritten by Corporation for Public Broadcasting, The Robert Wood Johnson Foundation, Aetna Life & Casualty Company, Exxon Corporation, The Edna McConnell Clark Foundation, The Commonwealth Fund, The John and Mary R. Markle Foundation, van Ameringen Foundation, Ittleson Family Foundation, and The Grant Foundation.

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CANSCREEN
Fox Chase Center for Cancer and Medical Sciences
Preventive Medicine Institute

PROJECT DESCRIPTION

CANSCREEN, sponsored by the Preventive Medicine Institute of New York City and the Fox Chase Center for Cancer and Medical Sciences in Philadelphia, is an important aspect of a Community Outreach and Public Education Program that evolved at the Fox Chase Center over a number of years. A growing complex of cancer resources have focused on excellence since the The American Oncologic Hospital was founded around 1900. In 1925 The Institute for Cancer Research began biological and biochemical cancer research. In 1928 the Jeanes Hospital was founded to meet the additional medical needs of the Fox Chase community. As the Clinical Research Program became established in 1965 and a new American Oncologic Hospital facility was opened in 1967, there seemed to be the critical mass of resources that indicated the need and ability to consider the behavior of the person as well as the behavior of the disease.

Realizing that their research and discovery would be useless unless people took advantage of knowledge on prevention, detection, and treatment, the Fox Chase Center decided to take an active role in reaching the community with public education about cancer.

From the start the program focused on ways of designating those individuals who stand a greater chance of getting cancer. These high-risk individuals are identified as people with "a family history of Hodgkin's disease or leukemia, a personal history of extensive exposure to the sun, the existence of irritation in the mouth due to sharp or broken teeth or ill-fitting dentures, a history of heavy smoking, occupation as an asbestos worker, etc."

The Community Outreach and Public Education effort has informational, attitudinal, and behavioral goals for the project. First, it strives to increase awareness of the danger signs of cancer, risk factors associated with different cancers, preventive measures, and resources for cancer detection and screening. Second, it hopes to alter attitudes about the need for and effectiveness of early detection. And third, it wants to motivate the community to use preventive and surveillance methods.

The specific three year goals for public outreach efforts are:

1. "To develop baseline data on the public's present knowledge of, attitudes about and practice concerning cancer prevention, detection and treatment.

2. To develop and test a model to discover the population at high risk and of developing a method to motivate them to adopt (whenever possible) preventive measures and to seek (as

necessary) periodic surveillance and/or treatment.

3. To demonstrate the effectiveness of consumer-professional collaboration in a community cancer education effort to upgrade the public's level of information, concern, and commitment to improved health behavior.

4. To evolve from a professionally designed and controlled community education program to one that is designed and controlled by local citizens."

CANSCREEN was designed by Kay Kukowski of New York City and Donna Dean of Philadelphia to promote early detection and prevention of cancer. They work with a Health History Questionnaire that thoroughly queries each individual. Included in the questionnaire are 175 items about known/detected cancers or conditions potentially leading to cancer; physical changes noticed over the past six months; presence of selected medical conditions in relatives; past or present physical problems specific to women and past or present physical problems specific to men; brief medical history; working history; and personal habits/opinions. All answers are marked on an IBM computer card for machine processing. Respondents are urged to indicate all items that they feel unsure of. The final page of the questionnaire allows the respondent to indicate preferred times for visiting the clinic. Appointments are established on the basis of that response.

The program emphasizes one-to-one relationships with the health counselors and examiners. They recommend that each individual assume personal responsibility for self-screening. Once patients are made aware of risk factors and their own health profile, it will be possible for them to request a doctor's help in various areas with certainty.

PROJECT ORGANIZATION

The clinic, designed as an educational experience, is staffed by a health team consisting of a receptionist, an examiner, and a health counselor. Each of the staff has specific educational functions. Currently, there are two such clinics. One is at the Preventive Medicine Institute in New York City and the second is at the American Oncologic Hospital in Philadelphia.

Once a target group has been chosen, (in the pilot study, a cross-section of people over age 45) they are sent the Health History Questionnaire. Next, an appointment at the clinic is arranged for each person. The questionnaire, during this pilot phase, is administered again at the clinic to obtain information needed for redesigning it. Once the project is fully operational, the questionnaire will only be completed by the person at home. A check-up is given that includes

cancer-specific tests as well as tests for diabetes and hypertension. The nurse-examiner carefully explains each test.

A health counselor then discusses the individual's high risk symptoms. It takes about 10-20 minutes for the counselor to go over the profile with the individual. The counselor also assists in helping the individual to take appropriate subsequent action such as a doctor's appointment, yearly check-up, or change in risk behavior. A copy of the physical report is provided both to the patient and to the patient's personal physician.

PARTICIPANTS

The initial population for the Philadelphia pilot test of CANSCREEN was the women who had donated funds to the Fox Chase Medical Center. Three hundred and fifty of the 5000 people on the list responded to a letter explaining the program and requesting volunteers. From these, the first 60 respondents were chosen. It was felt they would form a high risk population since the original letter indicated that the volunteers should have an interest in cancer susceptibility. This pilot operation began in April, 1974.

The New York sample included 104 persons chosen from a list of Blue Cross subscribers. The pilot phase for New York City began in June, 1974.

A pre-test version of the questionnaire was sent to 2000 Medicaid recipients in Maryland and 200 employees in the Philadelphia garment industry as well.

MATERIALS

A Health History Questionnaire

OUTCOMES

Since the sample of people tested numbers only 164 the project must still be regarded as in a pilot stage. The questionnaire's effectiveness has not been determined, nor is it certain that high-risk individuals can be identified with it. Neither has there been any follow up on the individuals in the pilot samples to determine if they have followed through on suggested actions or behavior changes.

Other difficulties have emerged as well. Some physicians have become concerned that their role may be usurped or that improper medicine might be practiced. The program staff has attempted to keep communications open with the physicians in order to explain the nature of the role they may serve. Also, some clients assume they will be coming to get a complete free physical examination, rather than a free exam on a few basic sites (uterine, breast, colon). The letter to the

participants is being redesigned to clarify this issue.

Innovative programs and approaches necessarily go through several phases. This project is particularly interesting, even in this early stage, in two ways. First is the effort to design and test a health questionnaire that will reliably indicate high risk individuals. Second is the development of a method to offer individual health education counseling that is reinforced by medical tests. This combination of services puts factors on a personal rather than a statistical level.

EVALUATION METHODOLOGY

The Health History Questionnaire has been the primary focus of CANSCREEN's evaluation to date. It is currently in the formative evaluation stage. Various pilot populations have taken the test and their comments are used to redesign the instrument. Eventually, the project will have evaluation data in the form of numbers of individuals seeking appointments, number of individuals who follow the suggestions of the clinic health educator, the number who drop out of the surveillance system of detection, etc.

FUTURE ACTIVITIES

Whether or not this program can continue depends primarily on available funding. A future expansion of the program would probably involve charges for the exam. There is concern that a fee would eliminate lower socio-economic groups from participating in this program. One possibility is that employees of local industries may be served on a package basis. It is hoped this type of plan will help overcome some of the bias of a usual fee-for-service arrangement.

SUMMARY OF PROGRAM

EMPHASIS

Several cancer sites--especially those where early detection and prevention are important.

COVERAGE

New York City and Philadelphia

MEDIUM

Questionnaire, examination, and interpersonal counseling.

COSTS

The initial budget for the program, including Philadelphia and New

York, was $50,000. The money was spent on salaries for staff and on computer time. Once the program gets going, they hope to charge $25-30, or more, for the entire service in order to make the program self-supporting. If this is impractical, additional funding sources will be sought. There was no cost to the patient in the pilot program.

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PROJECT HEALTH
G.D. Searle and Company

PROJECT DESCRIPTION

"Good health is good business." That's the motto of PROJECT HEALTH, a program designed by G.D. Searle Company for top level business executives. The purpose of the health education program is to assist corporations and businesses in providing their employees with accurate and comprehensive information about preventive medicine. The materials are sophisticated and intended to inform and motivate.

In developing the program, Searle Educational Systems, Inc., a subsidiary of G.D. Searle and Company, recognized that "The increasing price you pay for illness...does nothing to prevent it." They knew that:

> One out of every four men in a company gets cancer.
>
> More than half of a company's executives die of heart disease between 45 and 54, their most productive years.
>
> One out of every 14 executives are crippled by emphysema.

PROJECT HEALTH was designed to change those odds. They point to statements like the one from the American Cancer Society that "half of the people who died from cancer last year could have helped to save themselves with a little practical medical knowledge" and the one from the American Heart Association that "we know that last year it was the victims' own ignorance that allowed most of the heart attacks to occur." These statements about the effects of low knowledge levels, coupled with the potential cost to companies ("poor health costs business up to 10% of its annual payroll"), represents the rationale for PROJECT HEALTH.

PROJECT HEALTH is a multimedia health education program that educates executives about eight hazards to their health: cancer, heart disease, alcoholism, mental illness, physical unfitness, respiratory diseases, drug abuse, and obesity. The staff of seven physicians consulted with 138 medical specialists to compile comprehensive, up-to-date materials in simple language. The health package includes films, monographs, guides for discussion groups, and quarterly newsletters.

G.D. Searle and Company's major emphasis five years ago was pharmaceuticals. Then a series of mergers took them into diagnostics. To complete the triangle of comprehensive health care services, Searle wanted to be involved in health education for prevention. PROJECT HEALTH now means Searle's interests extend from prevention, through diagnosis, to treatment.

PROJECT ORGANIZATION

The education program is presented to the executive in a three part learning system. Part 1 is the PROJECT HEALTH film that the staff describes this way:

> "A person learns best through experience. So every PROJECT HEALTH program begins with a film of real-life scenes presented in a contemporary, journalistic style which takes advantage of the most advanced educational techniques."

Each of the eight films shows documentary scenes of businessmen. The intent is to show how the things one does, or doesn't do, affect health. Following these scenes, leading medical authorities discuss the problem or disease and indicate how preventive measures can best be used.

Part 2 is the PROJECT HEALTH library. Eight PROJECT HEALTH monographs review and amplify the material presented in each of the films. The staff says:

> "But more than a medical encyclopedia, the PROJECT HEALTH monograph is a guide to practical preventive medicine for your home and family."

Part 3 is the PROJECT HEALTH executive test. At the end of each monograph, there is a self-testing section that reviews the principles and facts of good health covered in the monograph.

Since the staff believes the "practice of preventive medicine never ends", they provide a newsletter four times each year. The newsletter is intended to help executives continue their awareness of the necessity of good health practices. The newsletter includes articles on new developments in practical preventive medicine and news of the latest findings in medical research. In some issues, a brief test is included as a refresher on the course content.

The project is designed to take one hour for each of eight months. During that time the film is introduced and shown, there is a discussion of the program, and the monograph is distributed. The program is a self-contained unit and requires nothing additional. There are speeches for each of the programs, a master schedule guide, a group of eight films, and eight monographs.

The program on cancer gives general information, warning signals, and types of treatment. Information on the cause of the following types of cancer is provided: skin, lung, lip, mouth, larnyx, stomach, colon and rectum, bladder, prostrate, Hodgkin's disease, leukemia, and bone cancer. Prevention is stressed once again. Particular emphasis is given to breast and colon cancers.

The monograph on cancer is called "CANCER: COMMON AND CURABLE. It is divided into eight sections. These are:

"WHO SAYS CANCER IS AN AUTOMATIC DEATH SENTENCE? Case histories of five executives who saw the face of cancer and beat the rap...told by them personally, and from the files of the Memorial Sloan-Kettering Cancer Center, New York City.

WHAT THE EXPERTS KNOW ABOUT CANCER A wild cell...heredity ...defective genes...hormonal dysfunction...a definitive short course in cancer physiology. Plus an interview with a noted researcher, Frank J. Rauscher, Ph.D. of the National Cancer Institute, who explains a major theory of the cause of cancer -- virus.

GUIDE TO THE CANCERS Not fun reading, as guides go, but a thorough look at each of the prevalent forms of cancer including descriptions, symptoms, and what your doctor sees.

THE PROJECT HEALTH WARNING GUIDE The seven common signs that signal cancer presented in more detail than you may think you need...until you read closely...plus a serious look at the value of your annual physical, by Edward J. Beattie, M.D., Chief Medical Officer and Chairman of the Department of Surgery, Memorial Hospital for Cancer and Allied Diseases, New York City.

THE ABCs OF RADIOTHERAPY AND CHEMOTHERAPY The reasons for hope...the techniques and tools, the ideas and inventions which are gradually suppressing cancer, told through exclusive PROJECT HEALTH interviews with Basil Hilaris, M.D., Associate Attending Radiation Therapist, Memorial Hospital for Cancer and Allied Diseases, and C. Gordon Zubrod, M.D., Section Director, Chemotherapy, National Cancer Institute.

A PRIVATE CONSULTATION ON CANCER PREVENTION AND TREATMENT Evesdrop on a round-table discussion with a noted cancer researcher, surgeon, and two physicians as they offer the best cancer advice you can get.

LIFESAVING REMINDERS FOR YOUR FAMILY Two little tests ...one your wife can do herself and the other one your physician can do in two minutes...fully explained in a chapter PROJECT HEALTH hopes will motivate every reader.

PROJECT HEALTH TERMS EVERY EXECUTIVE SHOULD KNOW Take time to read this informative glossary of cancer terms."

PARTICIPANTS

Executives in large businesses are the primary audience -- men who are probably 40-60 years of age. Women and minorities are not reached simply because they are not often found in executive management positions. The families of the executives are reached indirectly. Many of the materials explain to the executive the kinds of prevention steps his wife and children should follow. About 400,000 people have been exposed to some part of the PROJECT HEALTH program. Users include 60 top executives at Chase Manhattan Bank, 1,000 executives at Pittsburgh Plate Glass Company, and 4,000 executives at General Electric. Some clients have chosen to purchase only part of the package. For instance, the Navy bought more than 200,000 copies of the material dealing with alcoholism.

MATERIALS

Film

There are eight films, one dealing with each of the eight areas included in the program. Films are produced by Medcom, Inc. in New York. The cancer film lasts about twenty minutes and deals with cancer at a general level, but includes breast self-examination, the seven warning signals, the importance of early diagnosis, and the importance of seeking an examination from a physician if a symptom is noticed.

The film is extremely professional. There are no gimmicks used, no professional actors. The film relies on brief documentaries and discussion of points by physicians. For instance, the cancer film illustrates several aspects of cancer and the need for early diagnosis. It is designed for a fairly high socio-economic group and presupposes some basic health knowledge on the part of the viewer.

Monographs

These are very professional, magazine type materials. There is one monograph for each of the eight target health areas. The monographs are designed to provide comprehensive information about the health topics. They are related to the films, but can be used independently.

At the back of each monograph is a self-evaluation section. The reader of the cancer monograph, for instance, is instructed:

> "To determine how much you've learned about cancer, take this quiz. All answers appear in the book, so if you miss a question, go back and review.

After deciding on your answer to each question, erase the adjacent box. In true-false questions, a "T" or "F" will appear. In multiple-choice questions, an asterisk will appear beside the best answer. If your answer is incorrect, the box will be blank."

The level of these questions can be illustrated by two examples from the cancer monograph:

"The most effective overall program for treatment of cancer is:

* x-ray
* combination of x-ray, surgery, and chemotherapeutic drugs
* antiviral drugs
* early diagnosis, prompt treatment

Are the following statements true or false with regard to breast cancer?

* A woman with a family history of breast cancer stands a statistically greater likelihood of its developing in herself.
* Breast cancer is very rare in women less than 35 years of age.
* Most lumps found during self-examination of the breast eventually turn out to be maglignant.
* Self-examination for breast cancer should be done just before the onset of menstrual flow."

Discussion Groups

The showing of a film is followed by a short discussion session.

Newsletter

Each person who participates in the program receives a copy of a quarterly newsletter.

OUTCOMES

Over 400,000 people have been directly exposed to some part of the PROJECT HEALTH program. Many more have probably been reached indirectly since participants are urged to share the monographs with their friends and family.

Although PROJECT HEALTH has undertaken no evaluation on the impact of the program, the staff reports two mini-case studies that they believe are indicative of the potential of the program.

"A 48-year-old comptroller receives this PROJECT HEALTH program on cancer. He learns that women past the age of thirty should do a monthly self-examination of the breast and require an annual Pap test to guard against uterine cancer. Thereafter -- at his request -- the comptroller's wife contacts her family physician; a curable uterine cancer is discovered even before causing her any symptoms.

A 55-year-old marketing director receives the PROJECT HEALTH program on heart disease. He learns that one of the first signs of a coronary attack is pain in the chest, brought on by exercise and relieved by rest. He has noted this symptom during the last six months but always attributed it to 'indigestion'. After a confirmation of the diagnosis by his physician, he is placed on a program of diet, exercise, and the proper drugs."

EVALUATION METHODOLOGY

Searle Educational Systems has not conducted evaluations of the entire program. The general policy has been to encourage each company to do their own evaluation of the materials. Many companies appearantly do have measures of knowledge, attitude, and behavior change. However, that information is not public. The only evaluation data available is specific to the materials prepared on alcoholism.

System Development Corporation (SDC), Santa Monica, did an evaluation for the U.S. Navy of the alcohol education media materials they had purchased and used. Several months after the conclusion of the program, SDC conducted a follow-up survey to "determine whether exposure of the film and possession of the monograph for a few months had affected the subjects with respect to:

1. Knowledge they had gained on alcohol and alcoholism;

2. Actions and/or reactions they could attribute to the materials;

3. Their use of and interest in the monograph;

4. Their evaluation of the materials; and

5. Achievement of the Navy's Alcohol Education Program objectives."

The five relevant objectives were:

1. "To achieve general acceptance of alcoholism as a disease which is preventable and treatable;

2. To identify alcoholics and alcohol abusers;

3. To remove stigmatic effects associated with alcoholism;

4. To promote attitudes of responsibility with respect to alcohol in those persons who choose to drink and the social acceptability with an individual's decision not to drink; and

5. To teach supervisory personnel how to detect alcoholism in its early stages and induce the alcoholic to seek treatment."

SDC designed a questionnaire to evaluate the materials and mailed them to a liaison at each of five naval stations where the program had been conducted. The liaison distributed the questionnaires to seminar attendees, collected them, and mailed them back to SDC.

Most of the respondents answered the nine true/false knowledge items correctly. For instance:

"Alcoholics drink every day. (False)	82.4% Correct Responses
On the average, alcoholics are absent from work 22 days a year. (True)	94.5% Correct Responses
Alcohol is a sedative not a stimulant drug. (True)	78.4% Correct Responses"

The next section of the questionnaire used true/false statements to measure how well the program objectives were achieved. Each objective was measured by several items. Most were answered correctly.

There were 10 sections in the monograph. Respondents were asked which portions they had read. Although most of the sections were widely read (on the average all sections were read by 78.3% of the respondents), the sections corresponding to the program objectives were most often read. In addition, the monograph was well liked with over 94% saying it was good or very good. When asked where the book was now 52.8% said it was at the office, 23.6% said it was at home, 15.3% said they had circulated it, 5.5% said they had given it away, and 2.8% said they had discarded it. About 80% had referred to the monograph two or more times since the conclusion of the program.

SDC concluded that the materials had been beneficial and had met the objectives established for the alcohol abuse control program. It was particularly difficult to assess behavioral change because adequate baseline data did not exist. However, knowledge and attitudes were changed by the materials.

Since these materials were prepared for business executives, it is important to note that they were well received by these Navy personnel even though 37% had no more than a high school education. This indicates that PROJECT HEALTH might be suitable for a wide range of employees in a company.

FUTURE ACTIVITIES

The primary future thrust is additional marketing of PROJECT HEALTH. If enough interest is generated, the staff is willing to adapt the materials to particular audiences. This has already happened to some extent in that a few of the monographs have been translated into Spanish.

SUMMARY OF PROGRAMS

EMPHASIS

Preventive medicine targeted for corporate executives.

COVERAGE

National -- through large corporations and government agencies.

MEDIUM

Film, monograph, discussion, and self-test

COSTS

Actual development costs are extremely high. Costs for the business who buys the package are about $48 per person for 1000 people or $26 per per person for 4000 people. A business does not need to purchase the entire program, but can buy any part of the package. The Navy bought a considerable number of the monographs on alcoholism at a cost of $2.50 each.

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EMPLOYEE EDUCATION
Philadelphia Department of Public Health
American Cancer Society

PROJECT DESCRIPTION

In 1971 the Philadelphia Employee Education Program was developed for female employees of the city by the Philadelphia Department of Public Health, the Office of the Managing Director, and the Philadelphia Division of the American Cancer Society. The city employs 9,000 women. About 40% attended one of the 60 meetings that were held throughout the city.

At each meeting, a film was shown and a talk given by one of the 15 doctors participating in the program. The dialogue following these presentations was viewed as the most effective way of reaching the women because it enabled them to express their fears about various cancers. They were encouraged to ask questions by the doctors. Some of the queries fielded by the doctors were "Does fondling of the breasts in lovemaking cause cancer of the breasts" and "What is the best time of day to do breast self examination?"

In 1972 the same format was adopted for a program for the Health Department's corps of community health workers. These workers, recruited from various city neighborhoods, conduct health education and community involvement programs among their neighbors. Special focus has been given to lead poisoning and rat control. Some have been trained to take blood samples to check for lead poisoning and to help at examinations for uterine cancer.

The material presented to the health workers needed to be more intensive than that given to the women workers. Finally a course was developed that lasted 32 hours distributed over three days a week for four weeks. The course included sessions on group dynamics, basic physiology, general information on cancer, and specific information dealing with the major sites of cancer. The material went beyond the breast and uterine cancer sites emphasized for the city employees. These health workers reach both women and men in their neighborhood meetings.

Many films and filmstrips were used during the course. Included was one film on the diagnostic and surgical procedures necessary for colostomies. The film was originally prepared for use in the training of physicians. Although there was some concern as to the appropriateness of this film, most of the health workers commented afterwards that the film had helped them understand the nature of cancer and the importance of early detection and treatment.

At the end of the course, the community health workers were

examined on the material presented during the course. Diplomas were awarded at a ceremony attended by officials of the American Cancer Society and the Health Department.

In 1973, the original program was extended to the male employees of the City of Philadelphia. The format is identical to the one used for the women, although a different film was shown. There have been 75 meetings held in the Departments of Water and Streets and in some police units. Again the question and answer period seemed to be an effective way of reaching these people. Questions included "Can cancer be transmitted through sexual intercourse?" and "Is cancer spread in the body during surgery?" The discussions also brought out that many of the men had symptoms that they did not have checked by a doctor. These included lumps, digestive disturbances, and urinary difficulties.

Approximately 3,000 of the 25,000 men employed by the city have been reached through this program. Plans have been made to continue it over the next two years.

PROJECT ORGANIZATION

The program was conducted in various departments in the city such as Sanitation, Water, Streets, Fire and Police. The success of the program depended a great deal on each department's cooperation with the Department of Public Health, since the employees had to be released from their regular jobs to attend the meetings.

The presentation was made available only once to each group. First the doctor attending gave a short talk and showed a film. For the women, breast and uterine cancers were considered and breast self examination methods were outlined. For the men, lung and colon/rectum cancers were discussed. A question and answer period concluded the hour meeting. The physicians used several techniques to get the group to ask the questions that were on their minds. One might say "Our ground rules for questions are those used for sex among mature adults -- nothing is taboo." Another might say "Perhaps you want to ask about a problem one of your friends is having." The physicians soon learned it was important that "what-you-always-wanted-to-know-but-were-afraid-to-ask" questions were elicited early in the discussion period. Otherwise, the questions remained polite and no one seemed to get involved.

PARTICIPANTS

The employees of the City of Philadelphia are primarily blue collar workers in the lower to middle range of the socio-economic scale. These individuals are not often reached in the general educational program of the local American Cancer Society.

The fifteen physicians (13 men and 2 women) recruited for the women's program were mostly gynecologists and obstetricians from nearby medical colleges and hospitals. Most had specialized in the treatment

of female cancers. The doctors used in the men's program had usually specialized in cancers affecting men such as colon/rectum. All were paid a small honorarium by ACS to cover expenses. Most of the physicians were young and seemed eager to help bring the message of cancer prevention and detection to the city employees.

MATERIALS

Along with the interpersonal presentation, films were shown. The women saw TIME AND TWO WOMEN. This ACS film "explains the value of the Pap test in detecting cervical cancer and points out that it is a quick, easy and painless test. It also explains the value of the pelvic examination in detecting other kinds of female cancer. Two case history of women with uterine cancer are dramatically portrayed in the film. One of the women ignored her symptoms for many months, finally seeking medical attention only to find that she had waited too long. The other woman whose cancer was detected in situ by the Pap test during her annual physical examination was treated and completely cured."

The men saw ON THE LINE a film that "deals with a true life experience of Jack Pardee, a professional football player with the Los Angeles Rams and the Washington Redskins who is now a coach. About ten years ago, shortly after another one of his successful seasons in which he had been named an All-Pro linebacker, he noticed that a mole on his upper arm was changing. His wife urged him to see a doctor. The lesion was found to be a malignant melanoma. He was treated and cured, eventually returning to football. He was again named an All-Pro linebacker. The film also deals with two other men. One is a cancer patient and the other is his friend. The film reveals their attitudes and feelings about cancer and its detection."

Two other kinds of materials were used in the program. Several of the ACS brochures on the specific cancer sites were distributed. And, for the women, a list of locations was distributed that told where free Pap tests could be obtained.

OUTCOMES

More than 6,000 people have been reached in this one hour program. Its effectiveness should not be based on measured long range behavioral change, but on the quantity and quality of information dispersed to a large number of people who usually hear nothing about cancer prevention and treatment.

EVALUATIVE METHODOLOGY

A questionnaire was distributed at each meeting. Results are available only from the women. The questionnaire asked:

"Have you ever attended any programs about breast self examination or the Pap test?

Do you practice breast self examination? How often?

Have you ever had a Pap test? If yes, was it within the last 12 months?"

In addition, women were asked it they would be willing to participate in a follow-up on the program by answering a few questions over the next couple of years. About 86% of the women agreed to future participation.

Results indicate that:

"82% of the women had obtained at least one Pap test and 60% had had the test within the last 12 months. On a national scale, in the United States, 77% of women 18 years of age and older have had at least one Pap test and 52% had the test in the past year.

With regard to measures to protect against breast cancer, however, the percentages were about the same for both the Philadelphia women and the women nationally. In both groups, slightly less than half do breast self-examination and about 15% do it on a monthly basis.

The greater use of protective measures against uterine cancer by the Philadelphia women is believed to be due to cancer education programs in the City, availability of free Pap tests in the Health Department clinics, and programs such as regular Pap testing activities which are organized in some of the City departments."

These results are important for planning of future activities. Although additional education could be provided on cervical cancer and the Pap test, decision makers must now recognize that even among women attending the program 82% had taken a Pap test. Since this is significantly higher than the percentage of women in the U.S. who have taken the test, it is possible that future educational programs should focus on breast cancer prevention.

Although there is no comprehensive data on why more women did not participate in the program, the staff has several possible conclusions. In talking with a few non-participants, the staff learned that some women already made routine visits to their physicians for physical examinations that include a pelvic exam and Pap test and felt the meeting was not important for them. Others indicated a fear of cancer and an unwillingness to be exposed to information about the disease.

Still others did not attend because their department was uncooperative.

The follow-up questionnaire was distributed to 76 women in one department. The results follow:

"Did you practice breast self-examination before you took part in the program? YES 24 NO 47

Do you practice breast self-examination now? WEEKLY 1, MONTHLY 9, QUARTERLY 9, SOMETIMES 49

Did you have periodic pelvic examinations before you took part in the program? YES 54 NO 21

Have you had a pelvic examination since the program? YES 69 NO 15

Did you have periodic Pap Tests before you took part in the program? YES 61 NO 15

Have you had a Pap Test since the program? YES 71 NO 5

Since the program, have you noted any lumps or other symptoms of possible breast cancer? YES 5

If YES, did you have further diagnosis and/or treatment as the result of these symptoms? YES 4 NO 1

Since the program, have you noted any abnormal bleeding or other possible signs of uterine cancer? YES 8

If YES, did you have further diagnosis and/or treatment as the result of these symptoms? YES 8

Did the Cancer Education and Service Program:

Increase your fear of cancer? YES 29 NO 35
Give you assurance that cancer can often be cured if detected and treated early? YES 64 NO 2
Leave you relatively unchanged regarding your feelings about cancer? YES 12 NO 20

The community health workers were asked about their reactions to their training. They indicated that the program made them "more aware of the facts about cancer and what can stop or prevent it in its early stages." In particular they felt they now knew "what to listen for when visiting people in the community" and how to "help to eliminate the myths and old wives' tales that a lot of people believe and are afraid of." One sign of commitment to use of the information they had learned is that shortly after the conclusion of the training program many of the health workers had arranged and conducted special meetings in their neighborhoods that focused on cancer education.

FUTURE ACTIVITIES

As stated previously, PHILADELPHIA EMPLOYEE EDUCATION PROGRAM has been extended to the male city employees. This portion of the program will continue for approximately two more years. There has been some discussion by the sponsors of the program about repeating it for women employees. Evaluation of the program will continue in the future.

SUMMARY OF PROGRAM

EMPHASIS

Women: Uterine and breast cancer and general cancer information

Men: Lung, colon/rectum, skin, oral, and prostrate cancers

COVERAGE

City of Philadelphia employees

MEDIUM

Interpersonal presentation, film, discussions, and ACS brochures

COSTS

Costs of the program were shared by the various sponsors. ACS paid honoraria to the physicians to cover out-of-pocket expenses.

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SMOKE-CHOKE-CROAK
American Cancer Society

PROJECT DESCRIPTION

In 1972, the Broward County Unit of the Florida American Cancer Society felt the need to reach school age children with a message of the harmful effects of smoking. The rationale for such a program was based on the follow points:

1. Statistics continue to indicate an increasing number of smokers among high school students.

2. Health habits and values that affect smoking behavior are developed at an early age.

3. Young children have the potential to influence their parents' smoking behavior.

4. Young children are probably not influenced by anti-smoking message prepared by and for adults.

5. Elementary schools provide the necessary context and resources for a project to reach young children.

Ann Ditullio established contact with the Director of Elementary Education for the Broward School System. As a result of that meeting plus one held with representatives of the school board, the Superintendent authorized ACS's Public Education Director to make a presentation to the elementary school principals at a pre-school workshop. Victor Puleo, Principal of the Lauderdale Manor Elementary School became quite interested in the potential of the project and requested that his school be allowed to participate.

The project was guided by three purposes:

1. To develop a set of values based on the knowledge of what smoking can do to your body.

2. To develop a message content and format that young children would accept.

3. To demonstrate the effects of smoking in the areas of health, safety, finances, and environment.

Working with the staff of the instructional television station, the ACS staff and Lauderdale Manor Elementary School staff wrote and produced a 15 minute color videotape entitled SMOKE-CHOKE-CROAK. It showed smoking as a habit that detracts from physical prowess, that is unattractive, that causes fires, and that costs a lot of money.

PROJECT ORGANIZATION

Although the project was initiated by ACS, the staff knew they would need the full cooperation of the school district, if they were to successfully carry out a program to alert elementary school children to the dangers of smoking. The Public Education Director established contact with the Director of Elementary Education and the Superintendent of Broward County Schools. After addressing a group of elementary school principals, the project focused on the Lauderdale Manor Elementary School. The principal of that school was enthusiastic about the proposed project. He suggested the program be videotaped so other schools could use it. He worked with Marion Bell, Director of the school district's ITV station. This closed circuit television station has many resources for such a production.

Elementary school children were interviewed and their comments were tape recorded. These tapes became the basis for the script. Children from the school were also the actors. The staff reasoned that although the situations in the film would be fictitious, the children would add an element of realism.

PARTICIPANTS

The participants in the film production were from the Fort Lauderdale school, the ITV station, and ACS. The program was produced by the staff of ITV and narrated by an ITV commentator. The script was written by the ACS public information director. Rehearsals were managed by the principal and teachers of the Lauderdale Manor Elementary School. Costumes for the film were provided by the parents of the school. Students participated by providing material for the script and by acting in the film.

The film was broadcast over closed circuit television to elementary school children. It is available for use all over the county. It has also been released for public television by courtesy of Instructional Television.

MATERIALS

One 15 minute color film on videotape was produced. Following is the script for one of the scenes:

VIDEO	AUDIO
MS of diving board by pool.	NEXT OUR CAMERAS TAKE YOU TO POOLSIDE WHERE GOLD MEDAL
CU of Sparky Mitz, with mustache and medals	WINNER SPARKY MITZ WILL BE TRYING TO ADD ANOTHER GOLD

around neck. CU of each swimmer as they are introduced. Shot of swimmers from the rear ready to start race. LS of race with Sparky leading. Shot of each swimmer as as he starts to go under. Lifeguards run to pool-side with life rings. CU of life ring with lettering "Smoke ring". Throw rings to sinking swimmers. MS of Sparky climbing out of pool putting on mustache. Sparky standing by anncr. CU of Sparky's face CU of announcer	MEDAL TO HIS COLLECTION. THE SWIMMERS TRYING TO BEAT SPARKY ARE BEN HEDGES, WINNIE SALEM, AND MIKE MENTHAL. THE SWIMMERS ARE IN THEIR STARTING PLACES. THERE'S THE GUN AND THEY'RE OFF. SPARKY MITZ HAS TAKEN AN EARLY LEAD AND IS OFF TO A GOOD START. THE OTHER THREE SWIMMERS ARE FALLING OFF THE PACE. NOW THEY LOOK LIKE THEY ARE OUT OF BREATH. BEN HEDGES IS GOING UNDER. THERE GOES WINNIE SALEM UNDER TOO. AND THERE GOES MIKE MENTHOL. HERE COME THE LIFEGUARDS TO SAVE THEM NOW. (LIFEGUARDS THROW THREE SMOKE RINGS TO THE THE SWIMMERS.) SPARKY MITZ IS SWIMMING VERY EASILY NOW AND WINS WITHOUT EVEN BEING OUT OF BREATH. WE WANT TO TALK TO SPARKY AT POOLSIDE. SPARKY THAT WAS A GREAT RACE FOR YOU. DID YOU FEEL LIKE YOU COULD WIN IT BEFORE YOU STARTED? SPARKY: YES SIR. IN THE LOCKER ROOM BEFORE THE RACE THOSE GUYS WERE ALL SMOKING CIGARETTES SO I KNEW I WOULDN'T HAVE ANY TROUBLE. ANNCR: THERE YOU HAVE IT BOYS AND GIRLS, THE WORDS OF A REAL CHAMPION. SPARKY MITZ, WINNER OF SEVEN GOLD MEDALS.

OUTCOMES

The purpose of the film included changing childrens' behavior and clarifying their feelings. It was also hoped that they would influence their parents. However, it is not possible to document what the outcome was or will be.

EVALUATION METHODOLOGY

No specific evaluation has been made at this time although the educational value to the children has been phrased as "inestimable." There are plans for a survey of school children who have seen the film. The community response has been positive.

FUTURE ACTIVITIES

ACS plans to have new school programs. However, any specific use of the SMOKE-CHOKE-CROAK film or procedures developed during this program are unknown at this time.

EMPHASIS

The film emphasizes the hazards of smoking for elementary age school children.

COVERAGE

Fort Lauderdale elementary schools

MEDIUM

Color film on videotape

COSTS

There were no costs born by the American Cancer Society outside of staff time. Production costs were absorbed into the ITV school system budget. Estimates are that the film production costs would have been $2,000. The ITV staff donated approximately 60 hours. Total number of volunteer hours, including ACS volunteers and school volunteers, was more than 200.

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SMOKING RESEARCH/SAN DIEGO
National Clearinghouse on Smoking and Health

PROJECT DESCRIPTION

Smoking Research/San Diego is a federally funded anti-smoking program that has operated in San Diego since 1966. The program has five major divisions -- Consumers, Youth, Health Professionals, Mass Media, and Training -- that provide educational programs for different segments of the community.

In 1965, the National Clearinghouse for Smoking and Health chose San Diego as one of two sites for a smoking control model health project. The Clearinghouse worked with the San Diego County Council on Smoking and Health that had been formed in early 1964. The Council was a cooperative interagency group that had demonstrated its ability to pull together many professionals. The seven charter member organizations were: San Diego County Unit of the American Cancer Society, San Diego County Department of Education, County of San Diego Department of Public Health, Bureau of Public Health Education, San Diego County Heart Association, San Diego County Medical Society, San Diego Unified School District, and Lung Association of San Diego and Imperial Counties.

The Council agreed to participate in the proposed program that would provide a test of health education and mass media programs. The San Diego County Medical Society became the contractor for the project.

The Council organized five program "commissions". Following is a description of each.

CONSUMER HEALTH EDUCATION COMMISSION. Members of this commission are drawn from business, social welfare, WMCA, YWCA, education, public health, and voluntary agencies. Its objectives are:

1. "To continue educational and promotional campaigns from within certain communities to influence the awareness of the consumer in regard to smoking and other risk-taking behaviors.

2. To develop cooperation and support from key groups in certain target populations such as the poor, union workers, industry, pregnant women, etc.

3. To investigate services such as 'quit clinics' and physical fitness programs that assist people in the community who wish to change certain health behaviors damaging to health.

4. To strengthen coordination and communication among participant agencies and individuals. Also to develop a dialogue with other community agencies and organizations which are not currently participating in the project.

5. To aid the health maintenance organizations and health care delivery systems develop methodology for the effective use of health related resources."

These objectives are met in such activities as a YMCA self-discovery series, an environmental-occupational health conference, smoking cessation groups, courses at San Diego Adult Evening School, training of women welfare recipients as health para-professionals, etc.

EDUCATIONAL PROGRAMS FOR YOUTH COMMISSION. Members of this commission include teachers, administrators, school nurses, specialists, and non-school youth group staff. Its objectives are:

1. "Encourage the development of smoking education activities in San Diego County Schools and youth-serving agencies.

2. Improve communications between agencies offering instructional materials and youth leaders conducting smoking education units.

3. Develop and demonstrate effective methods of favorable influencing attitudes toward teaching about smoking and health.

4. Stimulate an interest in a continuing educational program in schools and youth agencies stressing the positive aspects of total health and the harmful effects that cigarette smoking has on positive health."

These objectives are met in such activities as teacher/school programs, peer group programs, classroom demonstrations, publications, etc. Specifically, the commission has provided training for teachers through inservice workshops. It provides lists of available materials on anti-smoking education. A publication WHAT'S NEW is mailed five times each school year to over 1,200 educators. Science teachers requested special materials on smoking that were not available. The commission developed a kit for grades 6-12.

The peer group program has been well received. High school students are trained to provide demonstrations for elementary school children and college students give demonstrations for high school students. These students are given four hours of training that include:

1. "Physiological effects of smoking on the respiratory and circulatory systems

2. Smoking and lung cancer

3. The influences of mass media

4. The political and economic influence of the cigarette industry."

The high school students in this program are recruited from the Key Club, a Kiwanis sponsored youth club.

HEALTH PROFESSIONALS COMMISSION. The members of this commission include hospital administrators, physicians, dentists, nurses, and pharmacists. Its primary objective is:

"To achieve a broad base of professional support and participation in cigarette control programs, particularly in face-to-face contact with patients."

The activities of this commission include the sponsoring of medical/dental symposia, hospital programs, conferences, inservice nurses programs, audio-visual materials, written materials, Tel-Med, etc.

Tel-Med is a library of tapes on health and medical information that was developed by the San Bernardino County Medical Society. It is available to the general public via telephone. The person calls a well publicized telephone number and asks for a specific tape by number. Brochures describing the tapes are widely available. There are 167 tapes in English and 92 in Spanish. All calls are answered by a bilingual operator. The service has become so well used that two, ten-line telephone machines have been installed. The tapes, written in easy-to-understand language, are three to six minutes long. The tapes are designed to help people remain healthy by giving them preventive health information, by helping them recognize early signs of illness, and by helping them adjust to serious illness. The list of tapes on cancer include such titles as:

BREAST CANCER
LUNG CANCER
CANCER OF THE COLON AND RECTUM
CANCER -- THE CURABLE DISEASE
WHAT IS A PAP TEST?
CANCER'S 7 WARNING SIGNS

MASS MEDIA COMMISSION. The members of this commission include the public information personnel at county branches of the Heart Association, Cancer Society, and Lung Associations as well as volunteers from the San Diego County Chapter of the Public Relations Society of America. Its main objectives are:

1. "To build awareness and acceptance of the project, so that it will be a resource in the eyes of the community.

2. To reinforce the smoking, alcohol, and health messages from all sources, forming a grid that both supports and supplements what health educators and health professionals are saying."

The activities of this commission include promoting programs generated by the other commissions and volunteer agencies, producing public service announcements for the broadcast media, writing articles for medical society magazies, writing pamphlets, and producing a newsletter.

TRAINING LABS. During the follow-on two year contract, the project began conducting "Training Labs" (conferences and workshops) on smoking control programs. The Council and the National Clearinghouse on Smoking and Health felt that the experiences of the past five years should be disseminated to others since the staff had learned much about what to do and what not to do. The usual size of the training group was 20 people; sessions lasted from one to four days. Several volunteer agencies, professional societies, school personnel, and RMP personnel came as trainees. Groups or individuals were responsible for travel and living costs, but all costs associated with the labs were paid for by the Smoking Research project. Some of the sessions have focused on the use of Tel-Med. These sessions discussed Tel-Med as a concept, use and design of equipment and tapes, and organizing the community to support and use the system.

PROJECT ORGANIZATION

Smoking Research/San Diego (SR/SD) was originally funded for five years (1966-1971) along with Syracuse, New York, as experimental programs in community anti-smoking education. The Syracuse project is no longer in operation. SR/SD completed the original five year contract and was funded for an additional three years (1971-1974) to act as a demonstration project that other cities might emulate. There was the expectation that other communities would send delegates to observe and be trained to conduct similar projects.

To some degree, this function has been served. Groups from SOPHE, interagency councils on smoking and health, and health associations have been trained but most communities have lacked the necessary funds to conduct the program as well as to send staff for training.

The SR/SD project has been staffed by 16 professionals. They receive technical assistance and consultative support from 17 participating agencies and more than 200 volunteers.

Smoking Research/San Diego is sponsored jointly by the San Diego County Medical Society, the National Clearinghouse on Smoking and

Health, and to a lesser extent, the National Institute on Alophol Abuse and Alcoholism.

PARTICIPANTS

The audience for SR/SD is all the residents of San Diego County. San Diego was chosen as the site for the program because it was a "self-contained metropolitan area, largely reliant on local media resources." There are almost 700,000 people living in an area covering 313 square miles. Residents are primarily white, middle-class, although there is a small Spanish community. The average income per household is $12,000. However, 31% have less than $3,000 and 21% have more than $10,000.

MATERIALS

A partial list of the varying types of media used in this "umbrella" program follows.

Presentations:
Peer group speakers are trained in workshops and appear in schools.
Conferences and workshops are arranged for physicians and other interested groups.
Smoking Cessation Clinics are utilized when they do not duplicate other local efforts.

Printed Material:
WHAT'S NEW is mailed five times each school year to teachers, youth leaders, etc., cataloguing local resources.
Signs for medical and dental offices with sayings such as FOR YOUR HEALTH'S SAKE AND THE COMFORT OF OTHERS, NO SMOKING PLEASE, have been posted in 25% of medical offices.
Mod posters, bumper stickers, etc.

Audio-Visual:
(Films, Tapes, Etc.)
Tel-Med
GONE BECAUSE WE LOVE YOU -- a documentary in color videotape on hospital sales of cigarettes.
THE SMOKING SPIRAL -- a film about a San Diego emphysema patient and his physician.
SMOKING SAM -- a dummy-robot with glass lungs demonstrating the effects of smoking.
HOW TO STOP SMOKING -- a slide series.

OUTCOMES

In 1970, 32.6% of males in a national sample reported themselves as being former smokers. Similarly in San Diego, 32.6% had quit.

Nationally, 14.8% of females had quit compared to 21.6% in San Diego. Thus some impact of the program's early years was felt among the county's female population.

More dramatic outcomes were forthcoming from an evaluation of smoking among San Diego youth. Between 1967 and 1970, smoking among 7th grade boys dropped from 16.9% to 9.5%, among 10th grade boys from 31.8% to 19.7%. Averaged together, the percentage of boys and girls' smoking has decreased in San Diego, while national figures show an increase for both boys and girls.

Here are a few additional outcomes of the program as measured after the first five years:

CONSUMER HEALTH EDUCATION COMMISSION. There were three years of smoking cessation clinics that were attended by over 800 people. Smoking programs were developed for many of the 300 PTA units in the county.

EDUCATIONAL PROGRAMS FOR YOUTH COMMISSION. A 17-concept curriculum guide was developed and distributed to all city, county, and parochial schools. Young teachers did classroom demonstrations in elementary, junior and senior high schools. Over 140,000 students participated in these programs. More than 300 students from Key Clubs have been trained to conduct student-to-student peer presentations. A guide to new films, slides, books, pamphlets, and other educational materials was published bimonthly and mailed to about 1,500 teachers.

HEALTH PROFESSIONALS COMMISSION. Of the county's 28 non-military hospitals, 17 have stopped or curtailed cigarette sales. Office signs stating FOR YOUR HEALTH'S SAKE AND THE COMFORT OF OTHERS, NO SMOKING PLEASE have been placed in over 400 offices. Approximately 600 pairs of Gough-Wentworth lung sections were purchased for physicians' use in counseling patients. Hospital-centered nursing inservice programs on chronic diseases related to smoking have been held at three hospitals.

Tel-Med received over 200,000 calls during the first year. These calls were placed between Monday and Friday (9 AM - 8 PM) and on Saturday (10 AM - 6 PM). Women made 72% of the calls, men made 19%, and children made 9%. Of these, more than 10,000 calls requested smoking tapes.

MASS MEDIA COMMISSION. The commission, working with the National Educational Television and Columbia Broadcasting System Television, produced two films. The NET 60-minute documentary entitled THE SMOKING SPIRAL was broadcast twice. The CBS production NATIONAL SMOKING TEST was shown once. The commission also produced a newsletter regularly and distributed it to more than 4,000 individuals. Television and radio spots were produced and broadcast on local media. Bumper stickers, buttons, special exhibits, literature carriers, posters, pamphlets, and

other mass communication devices were produced and distributed in large quantities. Two popular bumper stickers read MORTICIANS DIG SMOKERS and CIGARETTES ARE BUMMERS.

TRAINING LABS. In the two years of conducting labs, 16 were held. Each group was approximately 20 individuals. A much larger number of consultation visits have been conducted. In addition, there have been two Tel-Med conferences. These focus on appropriate use of Tel-Med and how best to make it a successful part of community health education.

EVALUATION METHODOLOGY

A private corporation, Opinion Research Corporation of Princeton, New Jersey, was contracted by the U.S. Public Health Service to interview a sample of 2,500 adults in San Diego prior to the commencement of anti-smoking programs in 1966. The questionnaire contained approximately 300 items, and usually took 90 minutes to administer. A national sample was also interviewed using the same instrument. The intent of these baselines was to identify a population weighted with smokers, and to observe changes in their attitudes and behavior over a four-year period.

FUTURE ACTIVITIES

It was hoped that SR/SD would continue to receive funding for Tel-Med over the next few years. When the National Clearinghouse for Smoking and Health closed in 1974, the Smoking Research/San Diego project was closed with a few of the activities of the project taken over by other agencies. However, the development of selected aspects of the project as well as spread of the community organization components to other pilot cities of the country, has been funded by the Bureau of Health Education, Center for Disease Control, Atlanta, Georgia.

SUMMARY OF PROGRAM

EMPHASIS

Smoking Prevention and Cessation

COVERAGE

San Diego County

MEDIUM

Presentations, Printed Materials, and Audio-Visual Aids

COSTS

The program has cost the San Diego County Medical Society a little over one and one-half million dollars of Health Services and Mental Health Administration funds over the past seven years. Tel-Med was budgeted at $36,000 for the first year. This figure includes 2 10-line phone systems, operators, tapes, etc.

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YOUTH PATIENT PANEL
American Cancer Society

PROJECT DESCRIPTION

In order to counteract the notion that cancer is an "old folks" disease, the YOUTH PATIENT PANEL was established by the California Division, Los Angeles County Unit of the American Cancer Society in 1972 and was initially presented at Chatsworth High School. Since then, the program has been given in many schools in the Los Angeles county area.

It started in October of 1971 when a woman walked into the Reseda Office of the American Cancer Society and volunteered her time. Since her special interest was young people, she began working with another volunteer to contact the three largest high schools in the area. The original idea was to see if the schools would be interested in a cancer education program as well as on-campus fund raising. The project evolved by first selecting one school (Chatsworth with 3,500 students), by exploring possible ACS materials, by drawing on expertise from the Unit ACS office, and finally by meeting with members of the student council. It was at this point in the development of the project that the students provided excellent input. They alerted ACS to the relative sophistication of the students, to the ineffectiveness of gimmicks, and to the real need to "tell it like it is". This advice prompted the Unit ACS education director to suggest a youth patient panel similar to one previous used only at the college level. The students were enthusiastic and soon had the idea approved by the student council.

The next problem was to recruit the youth panel. This original group consisted of young cured cancer patients. There were five panelists, ranging in age from 15-20. One of the males had an eye removed when he was three years old and the other had a testicle removed at the age of fourteen. Two of the female panelists had a leg amputated at the age of ten, and the third had a colostomy when she was fourteen.

Finally, an entire week's program of public education was built around the interests expressed by the students. There was to be the youth panel, an assembly with a physician to explain about cancer, a talk discussing volunteerism and what youth can do about cancer, and use of ACS films and brochures.

The goal of the program was general education in the types of cancer that affect young people. The impact of this group upon people their own age was quite effective. Whereas Sonny and Cher were laughed out of the high school gymnasium with a program on drug abuse, the youth patient panel was received quite well. The "hopeful" side of cancer was stressed and the presentation included such topics as body awareness and healthful behavior patterns related to cancer and to youth.

ACS staff wanted to know which elements of the program were most

effective so future planning could build on the results. Graduate students from San Fernando Valley State College Health Science Department were co tacted and seven students were chosen to help evaluate the effort.

PROJECT ORGANIZATION

The panel makes their presentation as the climax of a week-long cancer education effort. Other activities can include:

1. Movie Mobile and Smoking Sam as well as other displays with information on cancer.

2. "Send a Mouse to College" fund drive where students donate money for laboratory mice.

3. Formation of a Teens Against Cancer club.

4. Assemblies featuring ACS or medical speakers addressing topics of concern to the students (e.g. quackery, youth and cancer).

5. Classroom discussions and projects.

6. Posters announcing the activities of the week, produced in art classes.

7. ACS films and brochures.

The panel is held either in the auditorium or in smaller classrooms, depending on the desires of the school planners.

The physician with the youth panel is a pediatric oncologist. The physician opens with a statement about the medical aspects of youth and cancer, and about cancer in general. Then the panelists are introduced. Each member discusses:

1. Discovery (warning signal, what was done, who was told about signal).

2. What the doctor said.

3. What were the early feelings about the situation.

4. What was the treatment.

5. What it was like to return to school and family.

6. What were the adjustments in life style.

At the end of the presentations, a question and answer period is opened to the audience.

Both pre- and post-testing is used to indicate the levels of knowledge in the student body at the high schools where the presentation is made. These questionnaires measure knowledge about cancer, its detection and cure.

PARTICIPANTS

The primary audience has been white middle class high school students, although the program was done in La Puente which is about 60% Chicano. The panel members are close in age to the audience which facilitates good rapport. The most enthusiastic response is found when the panel includes students from the local school. Even without local participation, panelists are responsible for making the entire week's program relevant for those who attend.

MATERIALS

Films on breast self-examination, displays, cartoons and printed materials, all of which are available through ACS, are used during the week long program.

OUTCOMES

The panel has visited 25 schools and has probably reached 200-300 viewers per school, although more than 2,000 students were involved in the Chatsworth program. Hopefully, following the program, those who have been contacted increase their knowledge of cancer danger and of the methods and importance of early diagnosis.

EVALUATION METHODOLOGY

The evaluation data provided two types of information. First it measured the knowledge conveyed in the public education effort. Second, it indicated the relative appeal of each of the components of the program. The first objective was met by use of a questionnaire containing 15 items designed to measure factual knowledge about cancer. The true or false items included such statements as:

> Ranging second only to accidents, cancer is the number one killer of the school age student, 5-15 years of age.
>
> Leukemia and Hodgkins Disease (two forms of cancer in youth) are always fatal.
>
> In any one year period in the U.S., the deaths from cancer in young people under the age of 15 is equal

to the total enrollment of Chatsworth High School (3,500).

One in every twelve live female births at sometime in their life will develop breast cancer.

The Pap test is a test that should be taken annually by any and every woman when sex becomes a part of her life.

The questionnaire was given to a representative sample of 600 students. All grade levels, class majors, and both sexes were included in the sample. The questionnaire was given prior to the cancer education week and again at the conclusion of it. For each item, the number of students answering incorrectly was determined for the pre-test and the post-test responses. A percent change was calculated. Several items were particularly discriminating and indicated that knowledge gain did take place. The first item mentioned above showed an increase of 47%, the second showed 29%, the third 16%, the fourth 42%, and the last 29%.

All teachers and a random sample of students were asked to complete an evaluation form that rated the value of the individual program components. Respondents could indicate feelings about six aspects of the education program by marking:

1. Most valuable program
2. Good - well worth the time
3. Fair - needs improvement
4. Poor - wasn't worth the time
5. Least valuable program - didn't learn anything

for the following programs:

1. Movie Mobile
2. Doctor Presentation
3. Youth Panel
4. Lay Speaker/Lecture
5. Displays and Literature
6. Total Project.

Additionally the students were asked if they would like to know more about cancer and if they would like to see other health problems presented in a similar manner. Teachers were asked if the program generated questions about cancer in class, if there is a place for cancer education in the curriculum, if they are aware of where to get additional information on cancer, if further training would be important for effective teaching about cancer, and if they had ever attended a Conquest of Cancer Workshop (offered for credit through the Department of Continuing Education in Health Sciences, University Extension and the School of Public Health, UCLA in cooperation with the American Cancer Society.)

Data from the student evaluation forms indicates the Youth Panel was best received. Combining the students who responded "most valuable" and "good", we find the Youth panel was liked by 90.8% of the students, Lay Speakers were liked by 68.0%, Doctor Presentation was liked by 64.1%, Literature and Displays were liked by 59.6%, and the Movie Mobile was liked by 50.0%. The entire program was evaluated as most valuable or good by 80.2% of the respondents.

FUTURE ACTIVITIES

Requests have been received from 22 other states for program guidelines. There is a good chance that the program can and will be implemented in other parts of the country, but so far it has not been done. It is possible that joint panels of youth and adults could be formed; the youth panel presentation could be videotaped for school use, although some interpersonal contact is needed; individual panelists could provide follow-up by visiting classrooms for more informal discussions; female panelists could join Reach to Recovery volunteers and visit physical education classes to discuss and demonstrate breast self examination. For the program to effectively reach minorities, it is important to recruit minority youth panelists.

EMPHASIS

General cancer, especially those which affect young people.

COVERAGE

Los Angeles metropolitan area

MEDIUM

Interpersonal presentation and printed materials

COSTS

The first year that the program was produced required 100 hours of

staff time and 400 hours of volunteer time to set it up. In subsequent years the program requires progressively less staff time and about 200 hours of volunteer time per year. There is no cost to the school since all ACS materials are provided free.

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STEPS IN THE CONQUEST OF CANCER and CANCER QUEST LINE
University of Wisconsin Clinical Cancer Center

PROJECT DESCRIPTION

Stressing the need for individual responsibility in health care, the Wisconsin Clinical Cancer Center feels that information must be made available and convenient so the public knows what they can and should do about cancer. Additionally, physicians need easy and economical assess to up-to-date reference materials and the benefit of being able to discuss recent advances in cancer with highly qualified specialists if they are to deliver optimal care to their cancer patients. In response to these informational and educational needs, the Wisconsin Clinical Cancer Center (WCCC) has developed two related programs that began in March of 1974.

The first, STEPS IN THE CONQUEST OF CANCER, is a series of 2-minute public service announcements, each presenting a complete story dealing with a cancer topic. These public service announcements are being aired on 39 Wisconsin radio stations outside Madison, and each refers listeners wishing more information to the CANCER QUEST LINE. CANCER QUEST LINE is a 24-hour, 7-days a week toll free number providing cancer information to both the public and physicians in the region. Callers are recorded and phoned back by a counselor who is then able to tailor information to the specific needs of the caller. This interpersonal contact is seen as especially valuable because the counselor can also respond to the emotional needs of the caller.

A public that is motivated to learn about cancer prevention and cure is the goal for WCCC's programs. It is hoped that some day, taking proper health care measures will be as automatic as toothbrushing, and as clearly one's own responsibility as is making a living. Most do not meet this responsiblity, and many have poor backgrounds of health information. The WCCC aims to teach the public that they have to care for their own bodies, and that there are some relatively simple things they can do in preventing or curing cancer.

It is this focus that has made WCCC select a range of detectable and treatable cancer sites, target a narrow population that is high risk and uninformed, and phrase appeals optimistically and simply. The STEPS IN THE CONQUEST OF CANCER tapes provide information on sites such as breast cancer, vaginal and uterine cancers, childhood cancers, colon-rectal cancer, cancer of the large intestine, and lung cancer. The information in these tapes can help educate the patient about cancer and also reduce the "jargon gap" between patient and doctor. Other tapes help the patient to understand the general nature of cancer, the importance of early detection, and different methods of detection and treatment.

The audience target for STEPS IN THE CONQUEST OF CANCER and Cancer QUEST LINE is "high risk" -- defined as older, rural, low income,

less than high school education, and with low access to and use of medical services. Radio stations outside metropolitan Madison, and radio stations carrying classical, popular, or country-western music were asked to carry the programs since these stations would be most likely to reach the target audience.

When listeners hear one of the STEPS stories, they can use the CANCER QUEST LINE to get more information. The counselor answering the QUEST LINE can contact any of 75 volunteer consultants who are physicians and researchers working in the field of cancer. She gives them the questions that she is not qualified to answer. This system provides the public with access to current, technical information about cancer, and also provides potential patients with the names of physicians in their area. The QUEST LINE additionally gives WCCC feedback about its programs and, through a questionnaire completed by most callers, some information about the demographics of the population using its services.

PROJECT ORGANIZATION

Both programs are funded by the National Cancer Institute and are administered by the WCCC at the University Hospital in Madison, Wisconsin.

After hiring media consultants to produce the tapes, the WCCC contacted radio stations with appropriate kinds of programming and requested that they present STEPS IN THE CONQUEST OF CANCER as public service announcements. Currently, 39 radio stations covering the state of Wisconsin are carrying the announcements. Every month, WCCC sends each station a packet of four different programs, requesting that the station play one tape per week. Thus, stations throughout the state are presenting the same messages during each week. It is not clear, however, how much of the population of the state is being reached by STEPS, since public service announcements are presented infrequently and at non-prime times.

Some sets of tapes in the STEPS library represent concerted efforts against certain cancer sites. One example of this work is a series of tapes about women. A tape on breast cancer discusses who gets cancer, how often it happens, whether it can be cured, and how it is detected. Another tape asserts that 95% of women developing breast cancer discover the disease themselves, and explains how women can perform breast self-examination at home. A tape on early detection discusses new methods that may be available in the future for finding out who will develop breast cancer before the disease strikes. And two different treatments -- lumpectomy and mastectomy -- and the controversy surrounding the surgical treatment of breast cancer are discussed in a final tape. Similar series of tapes focusing on other sites have also been made.

In early 1974, WCCC staff began the planning of a DES-Colposcopy

information program. Using the mechanism of STEPS in the Conquest of Cancer and the CANCER QUEST LINE, the campaign was designed to alert physicians and the public to the potential of vaginal cancer in young women whose mothers had taken diethylstilbestral during pregnancy. The initial releases, sent to physicians in the state, were followed up by announcements to the public at risk. WCCC obtained the cooperation of seven colposcopy clinics. The clinics were alerted to the potential of increased use. Each clinic agreed to provide WCCC with data on the number of DES related examinations from the comparable month the year before the information campaign started and from the month after the campaign was underway. Early results indicate an increase of examinations of more than 700 per cent.

In preparation for all callers on the QUEST LINE, the WCCC completed an index of subjects related to cancer and located consultants at the University of Wisconsin who agreed to answer questions or meet needs in specific subject areas. A 24-hour answering service was developed with university operators, and a QUEST LINE questionnaire was designed to measure user satisfaction. These arrangements make it possible for each call on the QUEST LINE to be answered, with the caller leaving name and phone number. Each person is then called back within 24 hours by a lay cancer counselor who identifies the problem. If there is a service she can provide or a question she can answer, the action is completed at that point. If the problem needs a response by a cancer specialist, she contacts the appropriate specialist for follow up. All users of the QUEST LINE are asked to fill out a questionnaire. Users of the QUEST LINE can also find out about a DIAL ACCESS Library of tapes that is available through the University of Wisconsin Continuing Medical Education Department.

PARTICIPANTS

Seventy-five University of Wisconsin faculty cancer experts agreed to make themselves available to receive calls from physicians or the public and answer questions in their area of expertise. The lay cancer counselor answers questions or meets needs appropriate to her expertise, and other calls are referred to one of the specialists so that caller has such contact within 24 hours. University of Wisconsin senior house staff provide backup to the lay cancer counselor. University operators provide answering service 24 hours a day, 7 days a week and connect the caller to the Dial-Access tape system if requested.

The lay target population, described earlier, was made up of "high risk" individuals. Physicians who need WCCC faculty expertise on programs, services, agencies, organizations and health institutions concerned with cancer, who need access to the latest diagnostic, therapeutic, and patient management cancer information, or who need to consult cancer experts for immediate patient management problems are the professional target audience.

MATERIALS

STEPS IN THE CONQUEST OF CANCER is a series of tapes presented over radio. WCCC is currently experimenting with 30-second television spots as well as 30-minute cable television programs.

The WCCC plans to incorporate each tape in the STEPS series into the DIAL ACCESS Library, a library of tapes that is available to callers on the CANCER QUEST LINE. The Dial-Access system is advertised in brochures by the University of Wisconsin, and has been part of their inpatient-outpatient information system in Madison. CANCER QUEST LINE is now being advertised in 10- and 30-second television spots.

Explorations by the WCCC staff into the possibility of free print advertising for QUEST LINE has been unsuccessful. However, use of the print media is particularly important because it gets the telephone number on paper without the listener having to scramble for pen and paper. The cost of a reasonably sized ad for the QUEST LINE would be prohibitively expensive. However, newspaper advertising in some form is still a goal, given the dramatic increase in QUEST LINE calls following one feature article written about the service. The various media will continue to be explored to determine which is most effective in reaching the target audience.

OUTCOMES

While it is never easy to measure the effects of a mass media campaign, it is particularly difficult to do so with a subject as emotion-laden as is cancer. However, one obvious source of information about the campaign's effectiveness is calls to the CANCER QUEST LINE. For example, QUEST LINE calls increased dramatically after the service was featured in a newspaper story.

The lay cancer counselor reports that she receives and responds to relatively few calls per day, but adds that the number of calls should not be the measure of success of the program. The public needs to tell experts what their needs are for public information about cancer, and the QUEST LINE can give the WCCC valuable feedback for developing future programs.

The types of persons calling the QUEST LINE are also of interest to WCCC. Fortunately, the program gathers evaluation data. Early results of questionnaire data showed that 54% of the callers were under 45 years old, 39% earned over $15,000, 57% had at least some college education, and 68% lived in urban areas. Efforts are now being made to pinpoint areas and media techniques that will help the cancer information reach the other high risk people.

Ideally, STEPS IN THE CONQUEST OF CANCER will educate the public about cancer and encourage them to take better care of themselves. It

will also inform them of the CANCER QUEST LINE service and motivate them to use it when they have questions. What they learn from these sources should allow them to communicate more effectively with physicians. Physicians should find a convenient and reliable source of current information about cancer in the consultants to the lay cancer counselor, and thus improve the quality of care they give their cancer patients.

All the programs of WCCC have benefitted by cooperation from the American Cancer Society and WCCC's careful preparations with the medical profession.

EVALUATION METHODOLOGY

A questionnaire was devised by the staff to assess how helpful the QUEST LINE is for users. Each caller is asked to fill it out, and the lay counselor reports that 85% agree and 75% actually return them. Questions are asked about the kind of service rendered by the Cancer QUEST LINE, whether or not the user would recommend the service to another, prior use of the QUEST LINE, where and how the caller heard about it, and the demographics of the caller. A later version of the questionnaire included questions designed to assess behavior change as a result of the quest line information. Data indicates how difficult it is to motivate individuals to carry through on recommendations. Seventy-seven per cent of all callers who received a recommendation actually contacted the person or facility.

An expanded evalution procedure will include three particularly high risk counties in Wisconsin. Arrangements have been made to concentrate a mass media effort using both radio and television, and a new questionnaire was developed to assess its effects. No real solution has been found for the problem of self-selection in the kinds of people who use the QUEST LINE, and no direct efforts have been made to explore the effectiveness of STEPS IN THE CONQUEST OF CANCER as it is presented over the radio. However, the kind of documentation and evaluation WCCC is undertaking enables it to continue to refine and calibrate the program until it is successful with the target population. Without the information it gathers, the program might eventually realize it was reaching individuals that it did not intend to reach, but would not have the means to alter the situation.

And finally, the point should be made that although the program, in its early stages does not seem to be reaching its target population, it is clearly reaching many individuals who feel they need the information. Continued studies of the population will enable the program to have effective targeted outreach.

FUTURE ACTIVITIES

Future plans include pretesting cancer messages to audiences such as medical wives, working class women, and working class men. Also, in

an attempt to reach the rural population rather than the urban population, WCCC will explore different media to discover which works best. To try to find the best medium to reach the target audience, WCCC plans a more extensive evaluation that includes an intensive media campaign on one subject, using the CANCER QUEST LINE to find out which medium is most effective and which kind of message content is most effective. The communication gap between doctor and patient has been a continuing concern of WCCC. They hope to test the wording of message so the public can learn about cancer without being patronized.

Thirty-second televison spots and half-hour cable television programs are planned. In addition, expansion of radio coverage is being developed as well as the addition of pamphlets on cancer detection and newspaper coverage. A cancer column will be produced, duplicated, and distributed to 40 newsweeklies around the state. A quarterly newsletter (CANCERN) sponsored by several Wisconsin cancer-related agencies carries information about state-of-the-art cancer research to all health professionals in the state.

A final long range goal includes encouraging the training of health care responsibility in children at the elementary school level. This phase of the program is just beginning to be planned.

SUMMARY OF PROGRAM

EMPHASIS

The emphasis in the content of the STEPS IN THE CONQUEST OF CANCER messages is cancers that are fairly easy to detect and that can be prevented or cured. A wide variety of cancer sites are covered: breast, uterus, vagina, colon-rectum, lung, large intestines, head, and neck. These are all cancers that the public can do something about, and the messages emphasize this as optimistically as is realistically possible.

COVERAGE

The programs are designed for the Wisconsin residents, with the exception of large metropolitan areas such as Madison that do not include high proportions of the target audience.

MEDIUM

Audio-tapes, video tapes, telephone lines and recorders, pamphlets, newspaper articles, and other printed materials are used in connection with the two programs. The list of audio-tapes includes such titles as:

Early Detection
No Benefits from Delay

Breast Cancer
Breast Self-Examination
Treating Breast Cancer
A Test for Vaginal Cancer
What Every Woman Should Know About D.E.S.
Childhood Cancers
Colon-Rectal Cancer
The Test for Cancer of the Large Intestine
Radiotherapy

COSTS

Staff time including a director-coordinator, the lay cancer counselor, and an editor-writer totals $35,000 yearly. A second health educator or counselor would raise this total to $45,000. Approximately two hours each week are donated by the medical consultants for this project.

The program development cost was under $3,000 for all stories in the STEPS IN THE CONQUEST OF CANCER series, and $1,600 is projected for next year in editing these programs in an effort to better reach the "high risk" populations.

The toll-free number used by callers on the CANCER QUEST LINE costs under $500, although that figure may increase to $1,500 next year.

Printed materials total approximately $900 including $200 each for three cancer control pamphlets and $1,000 for the first issue of the cancer state-of-the-art newsletter.

Promotion and publicity costs for the 10-second television spots and D.E.S. announcements will total approximately $1,300 each.

The total projected cost for these and other programs within the Wisconsin Clinical Cancer Center for next year is $70,000.

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CANCER PUBLIC EDUCATION RESEARCH
Manchester Regional Committee on Cancer

PROJECT DESCRIPTION

The Manchester Regional Committee on Cancer's Educational Project began in 1952. At that time there was much concern that educating the public would increase fear of cancer and cause patients to delay even longer before seeking medical help. The first work of the Project was to show that a carefully planned program of public cancer education did not cause "undue anxiety or give doctors unnecessary work."

Before initiating any educational efforts, the Project conducted a survey of knowledge, attitudes, and behaviors related to cancer. In 1953, they completed a survey on cancer. Their results showed:

> "People's private attitudes...are no doubt less enlightened than they are prepared to admit, but their 'public opinion' is enough to show the need for education. Cancer of the cervix is predominantly a disease of the lower social groups; yet it is in this class that ignorance of the symptoms is most profound. The great majority of women realize the possible significance of a painless lump in the breast, but there is no sense of urgency when cancer is so widely believed to be incurable.
>
> The survey has shown that women are interested. They must be made aware of the good results that are possible if cancer of the breast and of the cervix are treated in an early stage, and their responsibility for seeking immediate advice must be constantly reiterated."

The seeds of the public education campaign exist in that summary of results. Within a few years, the Project had shown to the doubters that education could be beneficial rather than harmful. The key was the type of educational message.

The geographic area encompassed by the Committee has expanded since those early days and now includes more than five million people. The Committee is housed in the same building as the Christie Hospital Department of Social Research in Malignant Disease. John Wakefield, previously Executive Officer of the Educational Project is now the Head of the Department of Social Research. Rennie Davison, current Executive Director, continues to work closely with Wakefield.

> "The aim of the Educational Project is to change for the better the public's attitude to cancer. It encourages those who notice a symptom that may turn out to have a serious explanation to see a doctor without delay, and educates the

public to adopt such preventive measures as having a cervical smear taken and modifying smoking habits. This involves dealing with long-standing fears and prejudices and trying to change deeply-ingrained behaviour patterns."

Over the years of researching and designing an effective educational program for the people of northwest England, the Project has developed an approach that relies on person-to-person outreach.

"This personal contact with individuals is achieved through a four-prong approach. We talk with people where they meet socially; where they learn, and where they work. We also brief doctors, nurses, and other health workers in the role they themselves play as educators of people they meet."

VOLUNTARY GROUPS AND SOCIETIES. The Committee realizes the importance of reaching adults that are part of an ongoing group. Any group can request a speaker to present a brief, informal talk about cancer. The speaker emphasizes the "reassuring aspects of cancer, particularly the ready curability of many forms of the disease when treated early." Of special interest is the way the speakers try to enlist the audience as helpers of others rather than to treat them as potential victims. Some audiovisual materials are used, and the sessions conclude with a question and answer time.

SCHOOLS AND COLLEGES. The Committee recognizes that much misinformation about cancer stems from childhood experiences. Knowing that the next generation of adults will continue in this pattern unless there is an intervention, the Committee has begun a research program in the schools. One report released recently describes an early project testing the effectiveness of two methods of influencing students between the ages of 16 and 20. The current program will last at least three years. It includes finding ways of reaching students directly as well as working with teachers. Secondary school children are helped to see that cancer is part of a group of serious, but 'ordinary' diseases. A disease that can often be cured, if treated early.

EMPLOYEE EDUCATION. The employee education program for industry and commerce was established in 1960. Small group lectures and discussions are used as a way of reaching workers. The nurse in charge of the program works with management, unions, and medical officers. The lecturer is always booked and there is enough interest to keep a second lecturer busy.

HEALTH PROFESSIONS. The Committee works with the teaching of undergraduate medical and nursing students and also conducts continuing education courses for doctors and hospital/public health nurses. Very early in the project, there was the decision to emphasize the general practitioner as vital in the screening program for uterine cancer.

The staff feels the family doctor is important for four reasons:

1. "he has a unique opportunity for persuasion when he sees his patients during the daily routine of his work;

2. he has a special authority and status which reinforces his recommendation to have a cytotest;

3. he will frequently come into contact with the 'hard to reach' and more vulnerable women (more recently called 'the high-risk group'); and

4. he is best placed to overcome the anxiety that such a test engenders and to alleviate the fears that arise from suspicious or positive reports."

The Project conducted a research program that included a study of public and professional attitudes to the screening of symptomless women, a profile analysis of two screened populations, a survey of women tested by their family doctors, and a detailed analysis of the different types of practices and facilities that result in different numbers and types of women screened. Wakefield concludes that the family doctor is an important factor in a program to screen nonsymptomatic women. He continues:

> "It does not, however, imply that all work must fall on the family doctor. He is entitled to the help of national and local publicity and health education about the cytotest."

PROJECT ORGANIZATION

The Manchester Regional Committee on Cancer is an independent, voluntary body. Its membership brings a range of related skills and ideas. These members include the Director of Radiotherapy and the Director of Research at the Christie Hospital, the Dean of the Medical School at the University of Manchester, medical officers of health, general practitioners, representatives from local government, the press, broadcasting, advertising, trades unions, local voluntary organizations, etc.

Since April 1974, the Manchester Regional Committee on Cancer acts as the agent of the Oncological Center for public and professional education, which is an integral part of cancer services. Clinical, epidemiological and sociological data will all refer to the same population served by the educational project, thus facilitating evaluation.

The emphasis of the entire program has been to research particular knowledge, attitudes, and behaviors about cancer and to design educational projects that utilize the findings. Additional research is then undertaken as part of the ongoing project so its effectiveness can be ascertained. For instance, a survey of women's views about cancer in 1966 had the following data:

> "In 1966, the majority of women in Lancaster thought cancer is the disease which kills most people in this country, and

they ranked it as the most alarming of five selected diseases. One third of them thought it never curable, although nearly nine out of ten recognised the value of early treatment. Most women were aware of the possible seriousness of a lump in the breast, but the significance of post-menopausal bleeding was not as well understood. Only a third thought any measures of prevention against cancer were possible; a quarter mentioned the cervical smear test, but only some 10 per cent had had one. ..."

Davison used these findings to plan the aims for the next educational project. He suggested that its aims should:

"include placing the seriousness of cancer as a killer disease more clearly in perspective, bringing about a greater realisation that breast lesions are frequently benign, thus reducing anxiety and delay, and increasing awareness of the potential seriousness of post-menopausal bleeding, especially in the lower social groups. For conditions of both breast and cervix, however, the purpose should be to enable women to decide a symptom is abnormal and requires medical investigation rather than to relate it specifically to cancer. Furthermore, the programme should seek out high-risk groups for cancer of the cervix and educate them about the purpose of the smear test as well as giving wider publicity to the service, in particular emphasizing prevention and peace of mind. ..."

A recent survey used a questionnaire similar to that used in 1966 to determine the progress that had been made and what next steps were needed. The 1973 survey data shows an increased appreciated of possible explanations of breast lumps other than cancer. Post-menopausal bleeding, however, still is not taken seriously by many women. Such assessments are meant to point to new directions for the program. The staff does not anticipate creating great change in a short amount of time. However, they want to know what people are thinking and believing, so they can accommodate changes that do occur. A philosophy stated by Wakefield in 1968 continues to guide the staff:

"ignorance of the true facts does not imply a complete lack of information of any kind. The individual has a total system of beliefs about health and illness of which false ideas may form part. Hence any new knowledge does not simply fill in gaps in the old but has to be grafted on to the existing system. Change will therefore be a gradual process."

A second example of the use of data is the program for teaching breast self-examination that was started at Merseyside Cancer Education Committee but is being continued in Manchester. Early studies indicated that women who found a lump in the breast delayed medical treatment if they suspected cancer. However, there was a need to teach breast self-examination if women's lives were to be saved. The research focused on how to teach breast self-examination in a way that would lead

to earlier treatment. In 1967 the project began. The Merseyside Cancer Education Committee produced a Teaching Kit consisting of a filmstrip, teaching notes and leaflets. The evaluation determined if women began breast self-examination on a regular basis after the course, as well as the effectiveness of the teaching methods and materials.

PARTICIPANTS

In general, the Project considers all the public in the Lancashire and Cheshire areas as potential participants in the various public education efforts. Individual projects have specific target audiences. Studies of the projects help to determine who actually was reached. The breast self-examination project took place in factories and companies. More than half these women were in the 40 - 60 age range. Approximately 75% were from Social Class II and III (non-manual).* Since breast cancer is more of a problem in the upper social classes than the lower social classes, reaching these women in this way has been effective.

Although it has been difficult to reach the social class IV and V women who are over 35, the Project feels they are the important target for cytotests. Although all classes and all ages of women should be screened, the Project staff believes that 'differential effort to achieve equal response' is important.

MATERIALS

Visual aids such as a flannelgraph are used in the lecture-discussion groups. It shows the antiquity of cancer, the common mistaken ideas about cancer causation, and the warning signs of ill-health. A cartoon entitled MARY MAKES UP HER MIND was designed for women low on the socio-economic scale. It shows one woman deciding to have the cytotest and convincing her friend to also take the test. The Co-ordinating Committee on Cervical Cytology in the Manchester area produces a CYTOLOGY NEWSLETTER for health professionals. It advises physicians of the results of recent studies and helps to make them a part of a community of professionals concerned with screening women. Although no posters are produced by the Manchester Educational Project, the staff feels they have an important role in public communication efforts. They report:

> "Two hundred women who had had a smear taken by their family doctor were interviewed to see what they recalled, how they had first learned about the test, and so on. Although they were not asked a specific question about it, 10 per cent mentioned having seen a poster about cytotests in the doctor's waiting-room.

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* There are five social classes in this schema with I being upper class and V being lower class.

"We do not know if posters displayed elsewhere have any persuasive effect. But in the waiting-room they seem to act as a sort of 'authorization' to ask the doctor about the test -- an assurance that he will not think a woman is fussing if she does ask."

OUTCOMES

There are two general statements about outcomes of the educational program. In response to the question "'Can cancer ever be cured?' only 30 per cent of respondents to a survey carried out in 1953 said 'usually' or 'sometimes'. This proportion rose over the years to 48.5 per cent in 1958, 54.5 per cent in 1964, 60 per cent in 1966, and 72 per cent in 1973. There
are signs that patients are coming earlier for treatment. For instance, during the same period the proportion of women treated for early cancer of the womb at the regional radiotherapy centre more than doubled."

Records analyzed in late 1970 indicate that the high-risk women were being reached in greater numbers. The staff says:

"It may not seem a very big improvement -- from 15.2 per cent of women in social classes IV and V in 1967 to 19.3 per cent by 1970. But this 4.1 per cent represents an extra 9,155 high-risk women who would not have had the test if the proportion had continued at the same rate as in earlier years. We hope this may be the beginnings of the breakthrough we have worked so hard to achieve."

The teaching breast self-examination evaluation data provides an example of the result of one educational program. Approximately 85% of the women tried BSE. Most found the experience as expected. Some women experienced difficulty in BSE. Their reasons lead the staff to conclude:

"that greater emphasis needs to be given in the teaching programme to the structure and general lumpy nature of the normal breast and we need to stress, that on initial examination, the woman is simply getting to know what is normal for her. Subsequently she should recognize any obvious departure from the normal."

Knowing someone else who practices BSE seems to influence a woman to try BSE herself. This finding lead to the conclusion that this:

"situation can be exploited by encouraging the audience to pass on to their friends this new teaching and discuss how they approach and cope with the procedure. It is also an argument for teaching BSE, not only in group settings, but in established groups...

In these situations there are opportunities for discussing both the idea and the experience of BSE with companions

who have shared the teaching session, and so reinforcement of group decisions becomes possible."

Comments evaluating the teaching methods and materials indicated that more explanation was needed. Some women asked that the slides be presented a second time. Although the visual already showed the procedure twice (once for the left breast and once for the right breast), it was decided that during the initial showing of the material some of the women were adjusting to the idea of BSE. The sessions were reorganized so that the filmstrip/slides are shown, there is time for questions and discussion, and then the material is reshown.

EVALUATION METHODOLOGY

Four approaches to evaluation are used regularly by the Manchester Educational Project staff. These are the questionnaire, interview, observation, and archival record. Questionnaires are most frequently used after a specific program. Interviews are used to determine general knowledge, attitudes, and behaviors regarding cancer. Observation reports are provided by speakers after their presentations. Some analysis of speaker effectiveness has been done and only certain speakers are sent to groups. Archival records provide important information on number and type of women screened and individuals seeking medical help at various points in the progression of the disease. The records are also used as the basis for a sampling frame of women. For instance, follow-ups using mail questionnaires or interviews are conducted on a random sample of women who have had the cytotest. Their knowledge and attitude toward the test is then ascertained.

FUTURE ACTIVITIES

The school program is perhaps the newest emphasis although there are a large number of programs and studies ongoing at all times. Since the staff uses research to modify approaches, there is rarely a discontinuity in the program. New information is added to what is already known and programs progress through iterative phases.

The staff is working on ways to help change the information and attitudes that young children have. The approaches being investigated include developing cancer specific materials in cooperation with teachers, developing larger curriculum units, teaching teachers, sending speakers to schools, etc.

SUMMARY OF PROGRAM

EMPHASIS

All cancers, but special efforts on breast, uterine, and lung cancers.

COVERAGE

Lancashire and Cheshire counties with a population of about five and a quarter million.

MEDIUM

Interpersonal, although some films, filmstrips and a flannelboard are used.

COSTS

Not budgeted by specific programs.

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CANCER EDUCATION AND INFORMATION
Cancer Information Association

PROJECT DESCRIPTION

The Cancer Information Association (CIA) was founded in 1956 by Dr. Malcolm Donaldson. Dr. Donaldson worked as a physician specializing in cancer. He became both professionally and emotionally involved in the problems of cancer and wrote a great deal about the prevention, diagnosis, and treatment of the disease. Dr. Donaldson died in early 1973. In his obituary we read:

> "He believed that Fear of Cancer was the greatest factor preventing patients from seeking advice early when they had unusual symptoms, and speaking with a voice of authority he began advocating an educational campaign designed to promote the early detection of cancer and to relieve the many unnecessary fears based on inaccurate information."

Dr. Donaldson founded the Oxford Cancer Information Association during his retirement years. He "devoted his time, energy, skills, and money to the practical application of his belief in the concept of better education for public and doctors."

Today, the Cancer Information Association is housed in the former Coach Booking Hall next to the bus station in Gloucester Green, Oxford. The emphasis is on creating a neighborhood center where many can "drop in". The center has a gift shop, an exhibition center, an information bureau and staff offices.

Although the neighborhood center concept is important to the work planned by the staff, there are other aspects to the program. There is an active lecture program. An effective flannelgraph is produced in large numbers and used in the lectures. The staff says:

> "The usual programme is a talk with one of the Association's films or the Flannelgraph, which has shown itself to be the most successful visual aid, encouraging audience participation. Lively discussions often follow a 3/4 hour programme and may extend to well over an hour and a half and prove stimulating and valuable to the lecturer as well as the audience. These programmes are designed to change attitudes from fear and apathy to awareness and confidence in the value of early diagnosis and treatment and for this purpose the small group is by far the most satisfactory."

The flannelgraph is also important in their school program. The Association has found that some schools do not have access to local health educators. To try to fill this gap, the Cancer Information Association has developed two types of programs. They conduct anti-smoking programs in the schools, and they also teach teachers about cancer. CIA is often invited to send speakers to talk with children. Although they gladly do this, they realize that with limited resources, they make more of an impact when they get teachers enthusiastic about the subject during a group session.

PROJECT ORGANIZATION

The staff has developed a philosophy that emphasizes the use of devices or gimmicks to attract public attention. However, they quickly point out that there has to be rich information and person resources to provide the necessary back up. Once a person becomes interested, there have to be quality brochures offering easy to understand information and people who are willing to 'just talk'.

The gift center is one attention-getter. It is housed in the front of the CIA center. The staff finds that many people come in to buy one of the hand made gifts or to offer to make some items. The gift shop seems to provide the 'excuse' for entering the center. Once inside, they often start to talk about friends or loved ones who have had cancer, about their fears of cancer, and about their beliefs. This then provides the staff with the opportunity to bring out facts about cancer, to tell them about prevention of cancer and about the importance of going to a physician or clinic when symptoms are experienced. When these people leave, they usually take away one or more brochures as well as a new orientation to cancer through this person-to-person approach. The staff says:

> "A steady stream of callers from all walks of life and of all age groups have come to look round and to seek help and advice. The Gift Shop window makes it possible for the hesitant to come in, and the chance to talk about their fears and problems helps them to understand better and encourages them to seek the medical advice about which they are so often afraid to 'bother' their doctors."

The respirometer is the second attention-getter. The staff finds that at fairs and other public gathering, many more people stop at the CIA exhibit when they have the respirometer available. As they now approach the third and fourth consecutive year at some of these occasions, they find many repeaters. Some come into the exhibit carrying the results of the test from the previous year. They are eager to see if they have improved. Again the staff knows that cancer education is more than a gimmick/machine. However, the respirometer serves the function of giving people a specific way to relate to cancer

information. Without the respirometer many people simply walk by. On several occasions when the respirometer was not working, the attendance dropped significantly. Those attending the exhibit are given literature. The personal element is always there. The staff often engage in long conversations with visitors.

PARTICIPANTS

The Cancer Information Association reaches a broad range of people in the Oxford area. This includes school children and their teachers and women and men from all social classes. Individual brochures are targeted for specific audiences, but the center exists to provide information to everyone.

MATERIALS

FLANNELGRAPH. The Cancer Education Flannelgraph was designed by the Cancer Information Association and is produced by Visigraph Ltd. It provides sufficient material for three separate lectures on:

1. General Cancer Education

2. Cervical Cytology

3. Cancer of the Lung and Respiratory Tract.

The complete teaching kit has six sections with each packet individually wrapped inside the main package. Complete lecture notes are provided as part of the materials.

LITERATURE. Brochures include two general ones, LIFE SAVING and WHAT EVERYBODY SHOULD KNOW ABOUT CANCER (written by Dr. Donaldson), as well as a series for different target groups. These include: CALLING ALL YOUNG PEOPLE: WHY YOU SHOULD NOT SMOKE, CALLING ALL YOUNG PEOPLE: TO SMOKE OR NOT TO SMOKE?, CALLING ALL SMOKERS: FACTS AND FIGURES, CALLING ALL WOMEN: MONTHLY SELF-EXAMINATION OF THE BREASTS TO BRING REASSURANCE AND PEACE OF MIND, CALLING ALL WOMEN: THE CERVICAL CYTOLOGY TEST TO SEE IF ALL IS WELL WITH THE WOMB, and CALLING ALL MEN: ABOUT RECTUM, BLADDER, and PROSTATE CANCERS. There is also a pamphlet, THE NURSING PROFESSION AND CANCER, for nurses and other health professionals. A second aid for nurses is a list of 85 questions that nurses are often asked. The information is conveyed in a question and answer format. For instance:

1. "Is cancer infectious or contagious?
   No. If it were infectious or cantagious, nurses and doctors would suffer more often than other people, but this is not so. The discharge from a cancer, if it does occur, is due to infection by microbes as in the case of a 'boil', and is not part of the cancer.

8. Is it caused by a blow?
No, but a blow may call attention to a cancer lump which is already there. Think of the number of blows the body receives, nothing happens and they are forgotten.

23. Is cancer of the throat easy to diagnose in the early stages?
This depends on whether the growth is on vocal chord or not, but as a rule it is not difficult.

34. How are patients to know whether irregular bleeding from the vagina is due to cancer or other causes?
They cannot, and for that reason they must go at once and see a doctor.

58. Does cancer cause loss of weight?
Yes, in the last stages.

60. Is civilization to blame?
No. Cancer existed among animals before man inhabited the earth. This is proved by fossil remains.

77. Does cancer follow a burn?
Very rarely.

84. Do sharp or broken teeth always cause cancer?
No. They tend to cause a chronic ulcer on the tongue which may become a cancer."

OUTCOMES

During 1972 and the first three months of 1973, there were a total of 106 lectures given. Of these, 73 were to women's groups, church organizations and other similar groups; 23 were to schools and colleges and 10 youth clubs. More than 4,000 people were reached this way. Many thousands more are reached at the fairs and public gatherings where the Cancer Information Association has staffed exhibits. In addition, the Cancer Information Center draws many people during the year.

FUTURE ACTIVITIES

The Cancer Information Association has been funded by voluntary contributions since it was founded in 1956. The general low level of money has limited the amount and type of work that could be done. Recently CIA has begun to receive official recognition and some financial support. A grant from the Health Education Council allowed them to move to the new location next to the bus station, to purchase a projector, and to buy a new van. Money from the Health Education Council as well as the Department of Health and Social Security has been

used to "mount a series of symposia at levels varying from members of the medical profession, nurses and medical auxillaries to members of the lay public."

CIA wants to conduct research and has had two of its proposals funded recently. They will add research personnel to the staff to conduct these projects.

The staff also hopes to remodel the present center so that a fully equipped and staffed exhibit hall can be established. They will have a respirometer, flannelgraph, posters, and other interesting materials on display. They feel it will cause many more people to 'walk in' to the center.

SUMMARY OF PROGRAM

EMPHASIS

General education about cancer, flannelgraph and brochures also cover education about cervical, breast, lung, and colon cancers.

COVERAGE

Oxford and surrounding area

MEDIUM

Interpersonal, brochures, flannelgraph

COSTS

The costs are not specified.

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PROGRAMS EMPHASIZING SCREENING OR DETECTION

BREAST CANCER SCREENING
HEALTH INSURANCE PROGRAM OF GREATER NEW YORK (HIP)

PROJECT DESCRIPTION

Since 1963, the Health Insurance Plan of Greater New York, under contract to the National Institutes of Health, has conducted a mass screening program for breast cancer detection. The project began as an effort to reduce the death rate from breast cancer that had remained steady for the previous 35 years even though there had been many medical advances. Survival rates increase significantly when there is no lymph node involvement. Since early detection of the cancer means it is less likely to have spread, HIP decided to try a large scale breast cancer screening program. Mammography, a detection method, had recently been developed and provided the necessary approach to screening large numbers of women.

HIP is a prepaid, comprehensive medical program with about 750,000 members. These members represent a heterogeneous group that includes various ethnic and socioeconomic backgrounds. The plan provides health care coverage for preventive, diagnostic, and therapeutic services in the office, home, or hospital.

In 1963, 62,000 women subscribers between the ages of 40 and 64 were randomly chosen to participate in this program. Half the women were designated as the study group and the other half as the control group. The project was to determine:

1. The effect of screening upon cancer detection and subsequent treatment, and

2. The effect of differential levels of effort in gaining the women's participation in the program.

Findings indicate that additional efforts such as telephone follow-ups and extra mailed communications substantially increased participation levels for the initial screening. Most importantly, those "reluctant" participants were found to stay on in large numbers for the subsequent annual examinations provided by the program.

PROJECT ORGANIZATION

Two weeks before a woman was scheduled to be examined she was informed by letter of the study and asked to make an appointment through the use of an enclosed post card giving her a choice of hours. When a woman returned her appointment card to the study office, she received in reply another postcard confirming her appointment and reminding her of the date and time.

Most of the women who did not respond to the first mailing were contacted through a second mailing sent after the first programmed screening date had passed. This second letter emphasized the importance of the examination. The procedure of the appointment postcard that was to be returned to the study office was the same as in the first contact attempt. Further attempts to reach women who had not made appointments consisted of telephone calls. The women for whom no telephone listings were availiable (about one-fourth of the study women) were approached only by mail.

Women who failed to keep an appointment were followed up by telephone, usually within a day or two of the missed appointment. It is estimated that about six of every ten women who at some time had broken an appointment were eventually examined. Similar contact procedures were used to reach women for the three annual follow-up examinations.

The control group women received their usual comprehensive medical care, but were not screened in the program. "Their breast cancer history was followed through records at central headquarters. Those women who were in the study group, but who did not participate in the screening, were followed through their health records."

> "All women who came for examinations were interviewed on various subjects including demographic characteristics, history of breast problems, and family history of cancer. A 20% random sample of examined women were further asked about their prior health behavior and about their views on a number of health topics. A brief interview was conducted among a random sample of non-participating women with listed telephones."

PARTICIPANTS

The women involved in the program were from the 40-64 year old age group. The roster of members in HIP who had belonged for at least one year provided the source for contacts. Nearly half the participants were of the ages from 40-49 years, and more than 90% were married at the time of the initial exam or had been married at some time during their lives. About 30% had some college education and 47% had completed high school; about 29% were protestant, 38% Catholic, and 33% Jewish. Twenty per-cent were black.

MATERIALS

To encourage women to participate, letters, post cards, and phone calls were used. All contacts were directed at the sample of women in the study group.

OUTCOMES

The overall participation rate among the study group was 65%.

> "When compared with non-participants, participating women tended to be younger, better educated, more likely to be Jewish and less likely to be Catholic. During the year

preceding the breast screening examination participants were more likely to have seen a HIP physician. Participants were more likely than non-participants to be concerned about the possibility of having cancer and to report specific symptoms associated with cancer.

Those requiring 'repeated' efforts were more likely than the 'minimum' group to be Catholics, foreign born, and low users of medical services generally. These 'reluctant' respondents were also less likely to be involved in the medical care programs of their medical groups as measured through their self-reports on the use of a non-group physicians and on whether or not they regarded a medical group physician as their sole family doctor. ... The effort groups did not, however, differ significantly on age, marital status, ethnic group, income or most recent occupation. There was also no difference in time required to travel to their medical group.

Sixty per cent of those who participated in the initial examination also had the three subsequent annual examinations for breast cancer."

Of these participants, 73% complied with minimal effort, 11% required a secondary effort, and 16% required repeated effort in order that they take advantage of the offered exams.

Those women who required minimal effort to recruit were more likely to return for annual reexams, although even among those requiring repeated efforts, 56% showed up for at least 2 of the 3 reexams.

"The test of the value of involving those requiring additional efforts in breast screening programs is the extent to which breast cancer is detected in this group and the effect of early intervention resulting from the screening program. Present evidence indicates that involving the resultant participant in breast cancer screening contributes to detection at a stage of development of the disease which improves its prognosis.

Results in actual breast cancer detection indicate at least as high detection rates among the reluctant screenees, justifying the additional efforts to promote participation. Equal percentages (62%) of breast cancers with no axillary nodal involvement were found among participants requiring minimal and increased effort for participation. However, among non-participants, only 40% of cancers detected included no axillary nodal involvement.

"There was a total of about 1,000 women who were recommended for biopsy as a result of intial or followup breast screenings.

It is known that from 98 to 99 per cent saw a physician concerning these recommendations. About 80 per cent of the recommendations were confirmed by physicians providing care, and four out of five went to surgery. Among those who did not go to surgery it was largely due to physician preference for keeping the patient under further observations before going to surgery.

Incidence rates among study group women who refused screening and among control group women were 1.37 per 1,000 and 1.86 per 1,000, respectively. The relatively low rate in the group not accepting screening examinations suggests that study women with a higher risk for breast cancer tended to self select themselves for screening.

In conclusion, although additional effort to derive alternative estimates of mean lead time appears to be warranted, it is likely that the estimates will fall in the interval of 1 to 2 years. It is hoped these values will be useful, for practical purposes, in determining periodicity of screening programs."

EVALUATION METHODOLOGY

An experimental field study with experimental and control groups (31,000 women each, samples stratified with regard to age, race, religion, education, income, etc.) was conducted. Primarily, outcome differences between participants and nonparticipants were tested.

FUTURE ACTIVITIES

Follow-up of all women in the mammography study will continue. There is now a new study being conducted on the use of thermography in mass screening for breast cancer. In the current study there are only a few centralized locations where women can go. This change from 'usual place of medical care' to a more distant medical center was necessitated by the expense and rarity of the equipment involved.

SUMMARY OF PROGRAM

EMPHASIS

DETECTION/SCREENING Early detection of breast cancer through periodic clinical breast examination and mammography. Included in the study are an initial examination and three annual re-examinations.

COVERAGE

The Bronx, Brooklyn, Manhattan, Queens, Nassau and Suffolk counties.

MEDIUM

Letters and telephone calls

COSTS

The cost of the program has not been calculated although it is assumed to be an expensive one.

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HAVE-A-CHECK
American Cancer Society

PROJECT DESCRIPTION

The HAVE-A-CHECK program was a concentrated effort to reach women in Maryland with information on uterine cancer, and to assist financially those who had never had a Pap test. The American Cancer Society guaranteed a maximum charge of $5 to cover laboratory and clerical expenses of each test administered. Physicians were recruited and asked to contribute their time to administer the tests.

Approximately 10,000 facsimile checks were distributed to women in three rural Maryland counties. The project, sponsored by the Maryland Division of the American Cancer Society, was linked both to the yearly Crusade efforts and to the new emphasis on "Let no woman be overlooked." The objectives of the program were:

1. "To take full advantage of the energy and talents of residential Crusade volunteers by having them act as educational couriers by carrying a message to homes as they collect for Crusade.

2. To reach women with life-saving information on Uterine Cancer and to assist financially those who have never had a Pap test through a well-coordinated Education-in-Crusade project, and at the same time to make the public aware that the American Cancer Society is doing something with their Crusade contributions."

An extensive publicity campaign was used both to prepare the communities for the distribution of the checks and to remind them to make use of the checks. Attempts to reach as many people as possible included saturating shopping centers, beauty parlors, and drugstores with flyers. Elementary school children were given the flyer to take home. Posters were displayed by local store proprietors after the Crusade to remind all women to endorse the check by getting a Pap test. All physicians in the area received a letter describing the project. They were told that some of their patients might request appointments to have a Pap test. When the facsimile check was presented, the doctors were asked to sign it before forwarding it to the Memorial Hospital in Easton where the tests were read.

A staff of over 800 volunteers were primarily responsible for publicity and distribution of the checks. Eight of the ACS staff directed the volunteers and recruited physicians to administer the Pap tests.

Dr. E.C.H. Schmidt, President of the Maryland Division comments "the HAVE-A-CHECK program was successful even beyond my earliest expectations." As a result of HAVE-A-CHECK one definite invasive carcinoma of the cervix was discovered for which that particular woman is undergoing treatment. If it hadn't been for the Pap test, her cancer may never have been discovered in time. Other benign conditions were found in several of the women such as enlarged uteri but they were noncancerous conditions."

PROJECT ORGANIZATION

Mrs. John Ullrich, Jr., chairperson of the Education-in-Crusade, summarized the procedures for instigating the HAVE-A-CHECK program in Talbot, Queen Anne's and Caroline counties of Maryland:

> "The Maryland Division Public Education Committee and the Standing Crusade Committee met formally in December 1972 to formulate plans for a stronger thrust in the area of Education-in-Crusade ... While conducting the residential Crusade, volunteers would be carrying a message to the public.
>
> The first step was to obtain the approval of the project from the Board of Directors of each county. Once this approval was obtained, a volunteer medical chairman was appointed. Our medical chairman was Dr. Justin T. Callahan of Easton. Dr. Callahan enlisted the help of the Health Officers and organized the clinics."

Women had two alternative ways of using the check. They could visit a Health Department clinic or their private physician. The Health Department in each county established special hours for the clinics. There were three clinics held in each county. These were open on one Friday evening (7 PM - 9 PM) in May, June, and July. The clinics were staffed by six physicians and several nurses who volunteered their services. These clinics provided a pelvic exam, Pap test, and breast examination for free. The ACS check covered the cost of the lab fees for the Pap test. Women choosing to visit their private physicians paid the usual cost for the appointment, but used the ACS check to pay for the lab fees associated with the Pap test.

Certainly some of the success of the program must be attributed to the careful planning for the project. For instance, a calendar of important actions and events was formulated. Monthly goals were established for the period from September through the Crusade in April. This included recruiting Crusade chairperson and physicians; conducting training meetings for volunteers, preparing and releasing news stories

and photographs to newspapers, radio and television; informing local women's organizations of the program; and involving minority organizations. Instruction sheets were prepared for the Crusade volunteers to assist in the distribution of the flyers and the actual checks.

Ms. Ullrich tells of other planning and action procedures that helped make the program a success:

> "In all of the counties, the Unit Public Education Committees had contacted each Crusade District Chairman and, in turn, his Crusaders to explain the program. All of the ministers in Talbot, Queen Anne's and Caroline counties had been contacted for permission to put a cancer prayer insert in their church bulletins, and Dr. E.C.H. Schmidt, President of the Maryland Division, had spoken personally at ministerial meetings to urge support of the program."

The clinics were organized so that women waiting for their examination would find ample information as well as a comfortable climate. The film BREAST SELF EXAMINATION was shown continuously at all of the clinics and was seen by most women as they waited their turn. At some clinics, volunteers served refreshments while the women completed a medical history card. ACS brochures were available as well as a tabletop exhibit on breast self examination and uterine cancer.

PARTICIPANTS

The women patients were usually well acquainted with each other since they came from the same community. Although the program was aimed at low-income women, most of the women who were responsive to it were middle-income.

MATERIALS

The primary material used was a facsimile of a check that could be used to obtain a Pap test. Other materials included the following:

Film:	BREAST SELF-EXAMINATION
Exhibits:	UTERINE CANCER: ON THE WAY OUT
	FIVE MINUTES FOR BREAST SELF-EXAMINATION
	DO YOU KNOW THE SEVEN WARNING SIGNALS OF CANCER?
Poster:	WHEN WAS THE LAST TIME YOU THOUGHT ENOUGH OF YOURSELF TO HAVE A PAP TEST?
Publications:	CANCER FACTS FOR WOMEN
	CANCER OF THE UTERUS
	CANCER OF THE BREAST
	A BREAST CHECK
	EVERYDAY THAT YOU LIVE

OUTCOMES

More than 85,000 publicity flyers were distributed in shopping bags in supermarkets, in drugstores, in post offices, in small stores, etc. A total of 10,402 checks were distributed by 753 Crusade volunteers in the three counties. Checks were also available at the clinics for those women who did not receive them as part of the Crusade.

During the 18 hours that the clinics were open for the HAVE-A-CHECK program, 249 women were examined. Almost 600 others were examined by their private physicians and used the check to pay for the lab work. Dr. Schmidt "informed us that one definite cancer has been discovered as a result of the program. Two other suspicious slides, along with other abnormal conditions, were found."

More than half the women taking the test were over 40. Results based on 765 women indicate that 317 were between 20 and 39 and 423 were over 40. Among these women, 52% (398) had taken a Pap test within the last two years, 21% (161) had last taken a Pap test more than two years ago, and 16% (124) had never taken a Pap test before. Most of the women were married (77%, 594) although some had always been single (10%, 74) and some were currently living alone even though they had been married previously (6%, 48).

Another outcome of the program was the increased enthusiasm on the part of the residential Crusade volunteers. They were much more persistent in reaching their friends and neighbors once they knew they were helping to educate the public rather than merely asking for contributions.

The third outcome of the program was the increase of contributions in the three counties. Using the previous year as the base figure, each of the counties had a significant increase. For all three counties the 1972 comparable figure was $23,999 and for 1973 was $35,336. The amount collected was greater than the goal of $31,400.

The program was judged to be successful enough to merit repeating it the following year. The same three counties plus two additional ones -- Dorchester and Kent -- were included in the program. Instead of three clinics held one each month, publicity efforts and clinics were tightly scheduled into a one month period. Although data is not yet available, the program is felt to have had greater impact. The ACS staff partially attributes this to the word-of-mouth publicity generated by women who had taken the test the previous year.

In an effort to target more on those women who had never had a Pap test and who are deterred by cost factors, a new program was launched in Anne Arundel County. The Pap Screening Program held there was inspired by the original HAVE-A-CHECK program. Rather than distributing checks to all women in the county, women were asked to complete a brief health questionnaire. The forms could be given to the crusader or mailed to

the American Cancer Society. Items included:

1. "Have you ever heard of the Pap test (also called the Pap Smear or Vaginal Smear test)?

2. Have you ever had a Pap test?

3. Have you had a Pap test in the past 12 months?

4. Was this the first time you had ever had a Pap test?

5. Your age?

6. Your schooling?

7. Your city or town?"

Those women who indicated they had not taken a Pap test became the first target group for volunteers to reach with information about a Pap test clinic. Each woman who came received a Pap test, a pelvic exam, and a breast examination. The program in its initial phase had screened 34 women.

Early data from Anne Arundel county program indicate the women are slightly younger (20 are between 18 and 39, 14 are over 40) than those participating in the HAVE-A-CHECK program. Twelve of the women are Black and 22 are Caucasian. Six of the women had Pap tests showing various types of infections. Six had inconclusive Pap tests and are being followed up.

EVALUATION METHODOLOGY

The medical history card was used to obtain information from women having the Pap test as part of the program. This information provided some of the evaluation data on who the program reached. Questions included age, when last Pap smear was obtained, use of birth control pills, use of other hormones, onset of menstruation, time since last period, number of children born alive, number of stillbirths and abortions, and number of children nursed for two or more months. The data does not indicate if the women who cashed in their checks could have afforded the exam without the check or if they would have sought out the test without the check. Without additional data, one assumes that the program was particularly helpful to the 124 women who had never taken a a Pap test before and somewhat helpful to the 161 who had taken the test more than two years ago. Since the response rate to the initial program was approximately 10%, we do not know the effect of HAVE-A-CHECK on the women who received checks but did not use it. Some of these women may have been prompted to visit their physician, but paid

for the lab fee personally as a way of making an indirect contribution of $5 to ACS.

FUTURE ACTIVITIES

HAVE-A-CHECK is being replaced with a new program by the Maryland ACS. The priority is shifting from emphasis on education to emphasis on action. A number of new clinics are being organized. Publicity will be used to get women to the clinic. There continues to be a strong emphasis on detection of uterine cancer.

SUMMARY OF PROGRAM

EMPHASIS

HAVE-A-CHECK was primarily a screening program for uterine cancer, but included general education about uterine and breast cancer. The value of the annual Pap test was also emphasized.

HAVE-A-CHECK was designed for and best serves the needs of a rural community. In the final analysis, HAVE-A-CHECK was able to (1) motivate volunteers since they were able to offer a service rather than simply supplying informaton in door-to-door canvassing; (2) increase community awareness of ACS and as a result, increase public support and contributions; (3) motivate some women to have the Pap test.

COVERAGE

Caroline, Queen Anne's, Talbot, Dorchester and Kent counties on the eastern shore of Maryland.

MEDIUM

Facsimile checks for Pap test lab fees were distributed in person during Crusade; Department of Public Health clinics

COSTS

The total cost of the laboratory fees was $2,560; 800 volunteers spent 3,350 hours and 7 staff members spent 55 hours.

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CANCER EDUCATION FOR INNER CITY RESIDENTS
American Cancer Society

PROJECT DESCRIPTION

Many of the American Cancer Society efforts rely on the mass media or individual volunteers to carry the message of cancer public communication. Philadelphia had often discussed the need to supplement these efforts with group discussions that might have more follow through. In particular, the staff was aware that residents in the inner city were almost always missed by the usual ACS approaches. The staff summarizes the problem this way:

> "Efforts generally were confined to a single contact meeting or to a series of displays indicating where the Pap test might be given, or to door bell ringing campaigns with the same purpose. No attempts were made to follow up the program or to capitalize on any momentum that was generated."

In particular, the staff realized new approaches were needed if they were to effectively reach blacks in the inner city where use of physicians, clinics, and hospitals occurs primarily for emergency care. Cost and inconvenience are real factors that hinder routine seeking out and using preventive medical care.

Thus in March, 1968 the Philadelphia ACS, under the direction of Dr. Benjamin W. Barkas, decided to test an action-research project that utilized the group approach. The project had four objectives:

1. "To discover, through a survey of published materials, visits, and interviews the experiences of others concerned with the problem of reaching ghetto dwellers with health education.

2. To distill and formulate principles which might be used in coordinating effective programs of cancer education.

3. To assess, through a pilot program, how effective group learning could be when the educational message is followed by concrete action, i.e. the Pap test.

4. To determine whether this education could be carried out by peer-group members given some pre-training in techniques."

The ACS staff wanted to enlist the help of community women who could be used as "educators" to recruit their friends, relatives, and

neighbors for a series of informational meetings to be held in their homes. Of course, these women would have to be given some training, but their primary value would be their natural rapport with the people close to them.

The success of the program would, in many ways, depend on the women chosen for the leadership role. Relying on the available literature about the selection of leaders in the military, industry, education, government, social work, and on their past experience, the staff looked for women who had experience in church or community work, who were willing to grow in this new experience, and who seemed to have "that revealing spark in the personality of the potential leader which does not submit to scientific analysis."

In the fall of 1968, CANCER EDUCATION FOR INNER CITY RESIDENTS began with a funding of $5,000 and the goal of reaching at least 50 community women to take on the position of leader. Five women were trained initially, receiving essential information about cancer and instruction in the basic techniques of discussion leadership from the project staff. Next, the women went on to recruit another fifty women to participate in the parlor sessions. After reading and discussing ACS literature, the leaders began to set up appointments for the women to have Pap tests. At times, it was arranged that a doctor would come to the housing project where most of the women lived to give the examinations. Nearby clinics were used as well.

The project was continued for a five year period. In the first three years, 47 leaders and 500 - 600 participants were listed on the rosters. Eventually, during the five years that the program was in existence, over 70 leaders and 1,100 participants were involved.

The women who participated as leaders earned a stipend of $100 for their efforts which was given to them through an incentive payment plan. After the first training session, the women were given $25. If they continued in the program, filled out the forms and contacted friends, they were given another $25. After the home meetings were held, they were given an additional $25. The final $25 was received after all the forms were returned, including the Pap test notations.

PROJECT ORGANIZATION

Training Sessions for Leaders

The ACS staff first spent time getting to know the women personally before introducing them to the ACS resource materials. Techniques were presented to the women that they could use in their home meetings. The same pamphlets that were used in the primary training were used by the

leaders in their homes. Pre-training usually took place in three two-hour sessions. The first of these meetings was held in the home of one of the newly recruited leaders. Subsequent meetings were held at the ACS office where the leaders began to feel they were part of a larger team effort. The training included the study and interpretation of five basic pieces of ACS literature; some basics on how to conduct an informal meeting; a preview of available films and audio/visual materials; some ideas on recuiting; etc.

The project director reports that the planning stage of the program can proceed slowly to give the leaders as much orientation and training as possible. However "once contacts with their groups have begun, 2 1/2 to 3 months is the maximum time to be allowed from first meeting to the Pap tests."

Group Sessions

The group meetings were relatively informal and socially oriented with refreshments being served. The local participants were found to be quite interested in learning about cancer and how it spreads, and the "seven danger signals". Later meetings covered uterine cancer and the Pap test, then breast cancer and the routine of self-examination. The average meeting lasted two hours. Meetings were held in several locations. Leaders recruited from North Philadelphia housing projects used their own homes. Leaders recruited from center city had some of their meetings in the homes of friends in West Philadelphia (the area of their family and friendship ties) and one meeting held in a church in West Philadelphia.

Later, the leaders arranged appointments for examinations (mostly Pap tests) and did a follow-up to see that the women in each of their groups kept their appointments. Some of the women were willing to go for the Pap smear after only one home meeting, but others took longer to convince. Two to three home meetings were usually needed before most women were ready to have a Pap test.

Leaders in the housing project worked with the ACS staff on making arrangements to have Pap tests done at a centralized location in the project. Leaders from central city decided to use a convenient hospital.

PARTICIPANTS

Leaders

Most of the leaders were black women from 30 - 40 years of age with strong ties to their communities in Philadelphia. Most of them had only a fourth to sixth grade education. Some had experience in church and community work.

In choosing the leaders, the ACS staff looked for a desire to lead and rise above the group. However, the $100 stipend became essential since many inner city women are not motivated to do volunteer work, and are not reinforced by the usual rewards. Those who were finally selected were usually moderately active in their community since the most active community leaders could not take on the added responsibility.

The women who became leaders were extremely capable and enthusiastic. Most felt comfortable in their role. All agreed that the program had been worthwhile. They had close contact with the Assistant Director of the project and any problems that came up were discussed. Most of the leaders were persevering when it came to getting their friends, relatives, and neighbors to go through with the Pap tests. Some of the leaders even went on to jobs in public health and social services, relying upon the experience gained through the program.

During the five years of the project, additional leaders were recuited. However, some continued with the program. Basic training was provided to all leaders and those willing to have more groups in their homes were given refresher training that included new material. Eventually it was difficult for a single woman to continue to recruit from her family and friends. If the same leaders are to conduct many groups over time, there needs to be a way to extend their acceptability to those with whom they are not acquainted. For instance, there are women in their church that they do not know well enough to recuit directly. However, the minister might establish the contact.

Learners

The women contacted were from similar backgrounds as the leaders; they had little education, were poor, and came from a highly mobile population. Many of them had the prejudices and fears that result from irregular medical care.

After the home meetings, the leaders continued to have some trouble in convincing the women to get the Pap test. Many were still apprehensive, some afflicted with lethargy. In the end, only one woman from the initial group was so afraid to go for the examination that no persuasive efforts could change her.

MATERIALS

The ACS publications used in the program included CANCER OF THE UTERUS, IF YOU ONLY KNEW, GIVE YOUR DOCTOR A CHANCE, and THE HOPEFUL SIDE OF CANCER. Various publications were also translated into Spanish for the Puerto Rican and other Spanish speaking populations living in Philadelphia.

Films were also used as educational devices, including TIME AND TWO WOMEN and FIVE MINUTES FOR BREAST SELF-EXAMINATION.

OUTCOMES

The program was in existence for five years, from 1968 to 1973. After the first year, the program was expanded to included an evening of films and a talk by a doctor or nurse. There were also local informational exhibits. Some of the groups grew to a membership of over 30 women from the initial size of 10 to 15. Pelvic examinations were also begun in conjunction with the Pap tests.

CANCER EDUCATION FOR INNER CITY RESIDENTS was also extended to the Spanish speaking community in Philadelphia which includes at least 50,000 Puerto Ricans. Films and discussions were found to be more successful than the printed matter in instructing these women. Educating individuals by word of mouth also worked. As an aid for the group meetings, ACS prepared tapes in which a Spanish-speaking physician answered questions typically raised in the discussions of cancer.

Over the five years of the program, more than 70 leaders were involved. At least 1,100 women were given the information in group meetings who eventually went on to take the Pap test. It was estimated that through word of mouth, each of the participants reached seven additional women who followed her example. The grand total of women reached probably numbers close to 8,000.

This type of program is well suited for implementation by other ACS groups as well as those groups with similar goals that wish to reach inner city populations.

EVALUATION METHODOLOGY

Evaluation of the initial training of leaders and their group sessions was done immediately after the leaders had completed their own records on the women who had taken the Pap test. ACS staff devised a simple questionnaire to elicit responses on quality of training, meaningfulness of experience, general impressions of the success of the project, willingness to act as leaders for a second time, etc. This data was supplemented with comments made during a general discussion of their experiences.

The second evaluation data was the record of the number of women who took the Pap test. The leaders were very conscientious in finding out where and when each woman took the test. Some used the arrangements established by the leaders, others made their own arrangements. This action step of taking a medical test provided the ACS staff with specific data on use of the group approach that has sufficient follow through to bring about behavior change. Each of the women also

completed a brief enrollment form as the group got underway. Included was some indication of prior knowledge and experience with Pap tests. However, no immediate or subsequent follow up on changes in this knowledge was ascertained. Further projects using this technique could determine long term changes in knowledge and behavior. The major problem to be handled is the high mobility of these inner city women.

The general findings include:

1. "Women with relatively little formal education, can with some training, effectively form and lead groups dealing with health problems, specifically cancer education.

2. Persistent education and prompting by peers can help overcome the lack of motivation to seek health care seen in many of the disadvantaged.

3. It is quite possible for these leaders to complete the action phase of our program - the taking of the Pap test - as the conclusion of their programs.

4. In certain situations it may be desirable to arrange for group testing. But it is also effective for the leader to work with her women individually, getting each one to use some city or community hospital or health center. This encouragement to personally utilize a health facility is a valuable educational process in itself, and may increase the number of women later going back on their own.

5. Every woman who is alerted to the message of early detection and care as the cure for cancer becomes an effective carrier of the message to friends and neighbors. This progresses logically from the Pap test to other areas such as breast examination and the need to cut down on smoking.

6. Leaders who function successfully in our project can, with the same approach, perform the simple tasks included in the job of health aide as it is now developing in New York, California and elsewhere."

SUMMARY OF PROGRAM

EMPHASIS

Uterine cancer and the need for a yearly Pap test were of principal interest. Some information on breast cancer and breast self-examination

was included.

COVERAGE

Philadelphia

MEDIUM

Primarily small group interactions. Some printed materials were used in the session along with films.

COSTS

The total amount appropriated for the project over the five years (1968-1973) was $31,500. This included $7,000 to 10,000 for leader stipends ($100/leader), $12,000 to 15,000 for program coordination and $3,000 to 5,000 for consulting and physician fees.

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CERVICAL CANCER SCREENING BY MOBILE VAN
Women's National Cancer Control Campaign

PROJECT DESCRIPTION

The Women's National Cancer Control Campaign (WNCCC) was started in 1965 by a small group of women from Stoke Newington, England. Although the original intent was to form a local group that would provide needed cervical cytology facilities, they were convinced by Mrs. Joyce Butler in the House of Commons to establish a national organization.

As the organization grew, it recognized that most of the public is protected from outside sources that might damage health -- laws regulate such matters as cleanliness in restaurants and contamination in water supplies. However, some kinds of protection require the individual to take initiative in using facilities that help them protect their health. The staff points out:

> "To build and staff a clinic is not to ensure that the right people go to it at the right time. The whole purpose of voluntary effort in the sphere of screening for cervical cancer is to seek out the most effective ways of informing people so that they will respond and ease the task of general practitioners, hospitals and local health authorities who are providing the service."

Available data for 1970 indicates that almost two million women had the cytotest (Pap test). There are approximately 18 million women aged 20 and over. The WNCCC feels that:

> "In order to reduce the mortality from cervical cancer in women of 35 years and over, the number tested each year needs to be at least doubled."

One contribution to this goal would be to use mobile units for screening. This approach was chosen because it seemed the best way of reaching the WNCCC's goals of:

1. "Improvement and expansion of facilities for cervical cytology,

2. Publicity and education directed at the lower socio-economic groups,

3. Change general attitude towards cancer."

Before carrying through on the idea of mobile units for screening, NWCCC sent a questionnaire to Medical Officers of Health in England and Wales that ascertained the pattern of available facilities throughout the country and the pattern of use. An additional item on types of

services that should be addressed brought in the response that breast cancer as well as cervical cancer should be included.

Knowing that a preventive medical service usually requires one to go to a particular center at a stated time, the NWCCC sought and obtained funds for a mobile unit. In describing the program, the staff says:

> "In a rural area with poor transport facilities, a mobile unit supplies a much appreciated service to women of all ages in a widely scattered population. In more densely populated urban areas, a mobile unit attracts the more reluctant woman, the poorer mum, who is most at risk from cervical cancer, yet who tends not to make an appointment at her local health clinic or with her family doctor. Every screening program is backed up with publicity in the local press and on radio and volunteers from the community are used to distribute leaflets and posters."

There has also been use of the mobile unit to do screening at factories. This has proven to be a good way of reaching women in the older age group who are sometimes missed in the neighborhood programs.

PROJECT ORGANIZATION

In 1969, the City Parochial Foundation gave a mobile unit to the WNCCC. It is 22 feet long and 7 1/2 feet wide which means it can be towed by either a towing vehicle or a Land-Rover. The interior is divided into several rooms -- a consulting room, two changing cubicles, an interview/waiting area, and toilet compartment. This unit, the first of two currently in use, is available only in London Boroughs.

The pilot project was a two day mobile unit clinic adjacent to Trafalgar Square. Local residents and workers attended. The staff believes that a program of at least four weeks is important to make the financial and personal effort worthwhile.

> "The existence of the programme in operation has a better chance of being talked about, and reported in the local press if it lasts some weeks.
>
> Hackney was the first borough to arrange longer screening programmes, beginning in 1969, when the total number of women tested was not far short of that for clinics during the whole of the previous year."

Programs in many boroughs have been conducted since these early ones in 1969. The WNCCC, during these years, has developed publicity materials that are used to bring women to the mobile unit. A film, CALLING ALL WOMEN, as well as posters and leaflets have been designed

for specific target audiences. One pamphlet is in both Hindi and English. A poster DON'T GAMBLE WITH CANCER was designed to attract the attention of older women. The Medical Officers of Health help distribute these materials. The term Cytotest is used in all materials because it is more acceptable to the public than the Smear Test, the name that had been used previously.

The WNCCC works with many others in providing this health service. They emphasize the importance of involving not only the local health authority, but also general practitioners, hospital pathologists, and consultant gynecologists.

PARTICIPANTS

The mobile units are used as a way of reaching women who do not usually get a cytotest from their general practitioner, or at the hospital clinic, local health authority, or family planning association. Many of these women are in the high risk category because of age and socioeconomic status. The staff says there are several reasons why these women do not have examinations:

> "One is sheer lack of time, another is lack of conviction or realization of the importance of a preventive measure, a third is a very real dislike of going to a clinic which is associated in their minds with attendance at clinics during their childbearing years, which they are glad are over, and which to them savour of hospital and illness."

By taking a mobile unit near their homes or to their places of work, the staff feels it can overcome some of the reluctance these women have. This reluctance is usually not related to cost since under the provision of the National Health Service all women can receive the test from their family practitioner or at the health center.

MATERIALS

Posters, literature, and a film are used to inform women about the importance of having a cytotest. Some themes are developed and used in several forms. For instance, CALLING ALL WOMEN is a film, is the title of a two page pamphlet, and is the title on a postcard showing a photograph of the mobile unit. The pamphlet shows a Hindi woman, a Black woman, and a Caucasian woman seeking information on, and having cytotests. Some of their fears and feelings of embarassment are shown in the drawing and text. The slogan DON'T GAMBLE WITH CANCER is used on a poster and a pamphlet. They also produce a series of pamphlets that begin "Sally -- have you..." There is one about breast self examination, one about smoking, and one about the cytotest.

Recently two new leaflets have been completed. They are for mastectomy patients and give advice about pre- and post-operative care.

OUTCOMES

Results of the various screening programs have been recorded for each of the boroughs using the mobile unit. Three programs exemplify the amount of use. The Hackney program provides results for three years. In 1969, an average of 118 women per week (over 9 weeks) were screened. Two positive cases of uterine cancer, 12 cases of atypical cells, and 10 cases of breast disorders were found. In 1970, an average of 78 women per week (over 5 weeks) were screened. One positive case of uterine cancer, one case of atypical cells, and four breast disorders were found. In 1971, an average of 122 women per week (over 4 weeks) were screened. One positive case of uterine cancer, four cases of atypical cells, and seven breast disorders were found. In each year, more than 100 other disorders were discovered. Appointments were made for these women as well as the cancerous or pre-cancerous women.

What kind of women were tested? Although the age range differed somewhat by year, most women were between 36 and 50. By the third year, they were beginning to screen older women. Between a third and a fourth had husbands who were semi-skilled workers.

A second program was carried out in the Borough of Richmond in 1971. An average of 282 women per week (over 4 weeks) were screened. The Medical Office of Health estimates that if there had been more time, the number of women screened would have doubled. All sessions were filled to capacity. An average of 78 women per week (over 4 weeks) who could not be screened at the mobile unit accepted appointments at well-woman clinics. A large number of the women tested were between 31 and 60. Most were from the skilled labor group. One positive result of uterine cancer, 13 breast disorders, and 677 other clinical defects were found. Approximately 26 per cent were found to need further treatment.

A third screening program was arranged in the Borough of Newham. The emphasis here was on screening for uterine cancer only in five large factories. During this short program, 290 women were screened. Although specific medical results are not available, it is the opinion of the Medical Officer of Health that the program created a general interest among employers in the area and that additional testing would take place as a result of this pilot program.

Other programs conducted during 1973 were:

> "in Salford where 1,549 were tested for 4 weeks, Keighley where 462 women were tested in 2 weeks, Northampton where the large number of 1,166 women attended in the short space of 6 days. One hundred women were tested in a furniture factory in Buckinghamshire in three days. The year finished with simultaneous programmes in Westmorland and Cornwall, which were both outstandingly successful".

In 1973 there was an 11 week program in Birmingham that was preceeded by a successful two weeks pilot the previous autumn. A mobile

unit was located in 13 different sites, including shopping centers and housing areas. An average of 509 women were screened each week. The study had the following aims:

1. "To describe and monitor a campaign to be mounted in the City of Birmingham to persuade women to participate in a cervical and breast cancer screening programme.

2. To identify sociological and psychological characteristics exhibited by women responding to the campaign, and by women ignoring it.

3. To study behavioural response - and particularly the role of social networks - to the battery of health educational strategies used in the campaign.

4. To survey attitudes of working-class women towards health prevention, and to provide an insight to the way in which they view cancer prevention and invitations to cytology.

5. To provide an understanding of the relative benefits of different health education strategies and interventions, and to suggest ways in which participation-rates might be improved in future campaigns.

6. To study the effects of a campaign using a mobile unit, on attendance at regular clinic sessions run by the local health authority.

7. To establish a pattern of operation, particularly on revisiting, for future use of mobile units."

"Preliminary results from the study show very clearly how the Mobile Unit was successful in attracting women of 'High Risk' groups and who were previously unscreened and open to the advantages to be derived from use of the Mobile..."

EVALUATION METHODOLOGY

Early in the program, the WNCCC used a questionnaire to determine the extent of available facilities for screening. The questionnaire was used as a way of obtaining information and establishing contact with the Medical Officers of Health. The data was converted into a list of resources that was used to guide women to places where the cytotest could be obtained. Later, once there were mobile units, the data was used to help locate the units in places where there were few facilities. Attendance logs and results of medical tests provide data on the effectiveness of each of the screening programs.

The Birmingham study used these methods. A brief self-administered

questionnaire was used to collect socio-demographic and biographic details, and included a short profile of attitudes toward health. These were completed while a woman waited to be tested. Second, a lengthly interview schedule was used with a random sample of women from a working class ward. It focused on the health-related attitudes held by these women. After the campaign, the same women were interviewed to see if it created any change in her knowledge of health prevention and/or her behavior. Third, records were used to determine the campaign's effect. For instance, did the mobile unit change the pattern of women using the local clinics.

FUTURE ACTIVITIES

There are three main types of activities planned. First, the staff wants to increase the number of mobile units available. They are planning three types of fund raising efforts -- donations, subscriptions, and gifts (e.g. mobile units) from large organizations.

Second, the staff recognizes the need for more research. They describe additional work in this way:

> "A project is in an advanced stage of preparation for a population analysis of different areas, followed by an evaluation of different approaches to women, particularly those working in industry. A piece of research of this kind could be of critical importance in the future to the whole field of cervical screening. Two new film scripts are ready. One that has often been requested by audiences demonstrates the early detection of breast cancer. The other is on the cytotest itself..."

The cytotest film is funded. Filming has started and it should be available in the near future.

Third, the staff wants to increase the number of industrial programs as well as expanding the number of boroughs that utilize the available mobile units.

SUMMARY OF PROGRAM

EMPHASIS

Prevention of cervical and breast cancers through screening programs.

COVERAGE

England, Scotland, and Wales with special efforts directed at England.

MEDIUM

Posters, films, and brochures as well as local media announce the need for screening and the availability of a mobile unit.

COSTS

"The cost of collection of a cervical test varies according to the situation in which it is taken and the age groups included in the screening. The average cost in a local authority clinic with full attendance is between 1 1/2 and 2 pounds. When the Mobile Unit was used in Richmond Borough, the total cost of a four week screening programme was only 1,140 pounds, as there were volunteer nurses available and clerical help was also given voluntarily. Without such help the cost would have been about 1,300 pounds but even this works out at only 1.14 pounds per test. To this has to be added the laboratory cost, estimated at 50p per test.

The cost of finding a positive case in a group aged between 20 and 60 years is about 200 pounds. When the group is re-screened after a time interval, the cost may be as high as 600 pounds for each positive case discovered. In assessing the significance of this figure in the health service as a whole, account has to be taken of the much higher cost of surgical treatment for a woman who has developed cancer of the cervix, for whom in addition to hospital costs there will be many other attendant expenses."

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MANAGEMENT OF INTESTINAL STOMAS
Regional Medical Program

PROJECT DESCRIPTION

"So you have a colostomy—SO WHAT?" begins one of the three self-care booklets sponsored by the Maryland Regional Medical Program for the rehabilitation of ostomy patients. A variety of materials, audio-visual and written, were designed and produced under the direction of Dr. M. Schuster of Baltimore City Hospitals. Approximately three clinics a week are held for patients. These materials, used in the clinics, fill a gap in rehabilitation education in an area otherwise clouded by false modesty and embarrassment. The materials will shortly be distributed nationally on a commercial basis.

A second aspect of the program is the Visiting Service provided by ostomates. Stable, competent, and well trained ostomates help in the new patient's adjustment. Whenever possible, a member of the Visiting Committee is chosen who is similar to the patient. For instance, age, sex, marital status and type of surgery has been found to be important. The United Ostomy Association organization guide is the basis of a brochure compiled by the Enterostomal Therapy Center of The Baltimore City Hospitals. The brochure discusses do's and don'ts for the members of the Visiting Committee.

A third aspect of the program is the telephone answering service for patients with problems. Currently about 20 calls a day are received. In the past, ACS volunteers helped with this part of the program. Presently the Director's secretary is handling all calls. The phone number is publicized on television and radio.

A fourth aspect of the program is material for paraprofessional training. Dr. Schuster has written a technical brochure designed to explain complications and psychotherapeutic procedures. He writes:

> "The more well adjusted the patient, the better he will be able to accept and adapt to the ileostomy; the more neurotic, the worse."

The program covers three types of intestinal stomas: colostomy, ileostomy, and the ileal loop. All are operations for the purpose of rerouting the waste disposal track. This type of operation is necessary when cancer of the colon or cancer of the bladder makes radical surgery necessary.

The post-operative procedure for guiding the patient back to a healthful, normal existence has been extensively researched and then described in an easy step-by-step format. The self-care manuals include care of the permanent appliance -- how to apply it to the body, remove it, and clean it -- as well as advice on diet, work, activities, clothing,

travel, odor, sex relations, and marriage. A list of manufacturers is included where the equipment for post-operative pouches and permanent equipment may be ordered.

The objectives of the program, based at Baltimore City Hospitals are:

1. "To provide direct patient education in the pre-operative and post-operative management of ileostomy and colostomy.

2. To train and educate toward self-care for patients.

3. To disseminate to physicians, allied medical personnel, hospital and large organizations new findings gained through experience with the proposed project.

4. To develop films, tapes and manuals that support education and self-care for patients."

PROJECT ORGANIZATION

This project was developed to fill the need for rehabilitation of ostomy patients. The American Cancer Society provided the initial financial support until the Maryland Regional Medical Program made a grant to the program. ACS continues to provide expertise as well as some help from volunteers. Currently, funding comes from private organizations, primarily the Mildred Mindell Foundation.

PARTICIPANTS

The primary audience is ostomy patients, mostly those in contact with the Baltimore Ostomy Association. Basically, this is a general audience, but probably composed of more whites and Jews in Baltimore than any other group. Those in the 24-40 year age bracket are more frequently reached because it has the highest incidence of ostomies. Blacks are not represented in the ostomate population.

There has been some discussion about translating the materials into Spanish which may help in reaching the Chicano population. In addition, this may help to make the materials available to Spanish-speaking countries, primarily Mexico.

As of January, 1973, "a total of 670 patients with colostomies, ileostomies and urinary diversions have received follow-up care and instruction in self-care at four Baltimore hospitals," since the program began in July, 1971. Other figures are not available detailing the numbers of people reached since then.

MATERIALS

Slide Tapes	COLOSTOMY IRRIGATION, ILEOSTOMY CARE These include a sound cartridge and fit easily on a portable projector.
Films	COLOSTOMY IRRIGATION
Manuals	COLOSTOMY -- A SELF-CARE MANUAL ILEOSTOMY -- A SELF-CARE MANUAL ILEAL LOOP -- A SELF-CARE MANUAL

Audiovisual specialists at Johns Hopkins produced the films. Each film runs about 12 minutes. Short segments at both the beginning and end are devoted to psychological preparation, emphasizing that ostomates lead normal lives. The rest of the film is a step-by-step demonstration on self-care.

The films and slideshows have been produced on a cartridge that can be used with a portable, self-contained projector making it possible for the patient to view it at home.

Until recently all materials could be purchased directly. For instance, the 12 minute, 16mm film COLOSTOMY IRRIGATION, in color with sound cost $90 for one print. Purchase of multiple copies (5-9) brought the cost down to $35 per print. The slidetape program COLOSTOMY IRRIGATION that includes 64 slides with a sound cassette cost $25 for a single copy. Distribution of audiovisuals is now being handled by A-V Scientific Aids, Inc. in Los Angeles. A new cost structure is being worked out.

Much of the program is built on the research done by Edith Lenneberg in Boston on the needs of ostomates. This research consisted primarily of a questionnaire sent to ostomates. The behavioral modification literature was also consulted.

OUTCOMES

The materials have been used in a variety of ways. For instance, almost 2,000 people have seen them at meetings, seminars, and conferences. Some of those reached are patients, others are therapists. The materials are also being shown at the 5th World Congress of Gastroenterologists in Mexico City. The Dutch Ostomy Association has translated the materials into Dutch. Such great interest in the materials seems to indicate that they provide good rehabilitation assistance and meet a real need.

The Baltimore Ostomy Association has begun to publish its own bulletin for ostomates with assistance from the program. The bulletin has become a model for other groups.

The program has also generated some publicity to help achieve an acceptable public image for ostomates. These efforts have included television spots, a Maryland Ostomy Education Week, symposia, and seminars.

EVALUATION METHODOLOGY

An evaluation plan was originally included, but lack of funding prevented follow-through; it was to test for social and psychological effects of the program.

FUTURE ACTIVITIES

As previously mentioned, there are plans to translate the materials into Spanish. The program will continue as long as time, interest, and funds permit.

SUMMARY OF PROGRAM

EMPHASIS

Pre-operative and post-operative care for patients with intestinal stomas.

COVERAGE

Primarily the Baltimore area. The AV materials have been sent to ostomy groups and various medical societies throughout the country.

MEDIUM

Slide tapes, films, and manuals

COSTS

For a two year period, from March, 1971 through June, 1973, there was a total operating cost of $129,664 for the program. About $80,000 went for staff and consultants, about $10,000 for equipment, and about $39,000 for travel, publications, and supplies. There were additional costs for the development of the films.

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CHAPTER V: SYNOPSES OF OTHER CANCER PUBLIC COMMUNICATION PROGRAMS

The search for cancer public communication programs was focused on efforts that had been initiated since 1960, that were documented, and that offered guidance for others designing new programs. Fifteen of these programs are described in detail in Chapter IV. Twenty-six additional programs follow. In the list below, the first sixteen emphasize prevention or general education, the next nine emphasize screening or detection, and the last one emphasizes rehabilitation.

MEDICAL STUDENTS TEACH THE COMMUNITY

SMOKING EDUCATION PROJECT

LEAVE IT TO LAURIE

THE BIG C - A TWO-WAY TELETHON TO SAVE LIVES

SIOUX INDIAN CANCER CONTROL PROJECT

ELEMENTARY SCHOOL HEALTH CURRICULUM PROJECT

A PILOT PROGRAM IN HEALTH EDUCATION RELATED TO THE HAZARDS OF CIGARETTE SMOKING

THE ANTI-SMOKING COMMERCIALS: A STUDY OF TELEVISION'S IMPACT ON BEHAVIOR

CONTROL OF THE CIGARETTE HABIT BY PSYCHOLOGICALLY AVERSIVE CONDITIONING: A CLINICAL EVALUATION IN 53 SMOKERS

A STUDY OF THE EFFECTIVENESS OF ALTERNATIVE MASS DISTRIBUTION OF LEAFLETS

A STUDY OF THE EFFECTIVENESS OF FILM PROGRAMS USED IN THE AMERICAN CANCER SOCIETY PUBLIC EDUCATION PROGRAM

"BREAST CANCER: WHERE WE ARE"

CAN-DIAL

SACK LUNCH EMPLOYEE EDUCATION PROGRAM

POSTER CONTEST ON THE HEALTH HAZARDS OF SMOKING

INDIAN COMMUNITY HEALTH REPRESENTATIVES

GERIATRIC CANCER SCREENING (MOBILE UNIT)

EXPERIMENTAL CYTOLOGY PROGRAM

COMMUNITY CANCER DETECTION PROJECT IN FLORIDA

RESPONSE TO A PROGRAM OF SCREENING FOR CERVICAL CANCER

MOTIVATION TECHNIQUES IN A CANCER DETECTION PROGRAM:
UTILIZATION OF COMMUNITY RESOURCES

CANCER CONTROL PROJECT - STATE OF MONTANA

PAP TEST CLINIC AND EDUCATION DEMONSTRATION IN THE INNER CITY

OPERATION CANCER CONTROL

DEVELOPMENT OF A PAP SMEAR AND BREAST SELF-EXAMINATION PROGRAM

CANCER CALL-PAC

PROGRAMS EMPHASIZING PREVENTION OR GENERAL EDUCATION

PROJECT: Medical Students Teach the Community

CITATION: Cauffman, J. G., and Anzel, D. M. "Medical students teach the community." JOURNAL OF MEDICAL EDUCATION, 46, July 1971, 618-620.

ANNOTATION: Medical students at USC learned about problems and possibilities for cancer education in the community by preparing and presenting educational programs to community groups. An assessment of one such effort - teaching lifeguards the dangers of and ways to prevent skin cancer - demonstrated its success as a public health education effort.

SPONSOR: University of Southern California School of Medicine

HISTORY: Medical students first participated in a program to educate them formally on the epidemiology of cancer, behavioral issues related to cancer education, etc. Next they broke into 25 teams, each connected with a community group of between 9 and 30 persons and guided by advisors for the task at hand. Their teaching efforts reached over 5,000 citizens. The medical students next instructed a group of 16 lifeguards in skin care and skin cancer.

COVERAGE: LOCAL: Los Angeles area

EMPHASIS: PREVENTION
DIAGNOSIS
Lifeguards were instructed to protect themselves against excessive radiation from sun, to observe changes in skin condition such as flaking and moles. They were also informed of the high curability of skin cancer when detected early.

MEDIUM: PRESENTATION: Given by the medical students.
OTHER MEDIA: Films, slides, and handouts were used. These resources were provided by the American Cancer Society, County of Los Angeles, Community Health Services, and the University of Southern California, School of Medicine.

AUDIENCE DIFFERENTIATION: Full time career lifeguards comprised the main group as well as seasonal lifeguards for whom the career guards would later be responsible. The lifeguards were considered a high risk group with regard to skin cancer; ten of the sixteen career lifeguards had already had cancerous growths removed.

DURATION: A single 90 minute presentation.

PROGRAM OBJECTIVES: For the lifeguard program: 1) To develop an awareness of the hazards of continuous exposure to the sun, 2) to train to observe any changes in skin conditions, 3) to increase their use of sunscreening agents, 4) to influence seasonal summer employees to exercise proper care of their skin when in the sun.

COST: Unspecified

OUTCOMES: Nine months later, thirteen of the sixteen lifeguards reported a greater awareness relating to skin care. Twelve began looking for changes in skin conditions. Nine of the lifeguards were crew leaders, and all of them had discussed skin cancer as a health problem with seasonal summer crews. Six lifeguards had always used sunscreening agents while nine were using such agents more frequently as a result of the program.

EVALUATION METHODOLOGY: Post-test questionnaires administered nine months after the presentation, having been prepared previously. They received a response from fifteen of the lifeguards.

PROJECT: Smoking Education Project (California)

CITATION: "Smoking Education Project." American Cancer Society Honors Citation Application submitted by the California Division (of the Society); August 11, 1972.

ANNOTATION: The Smoking Education Project studied the feasibility of developing a standardized group method in smoking cessation and self-sustaining stop smoking programs. After a year of testing materials and procedures through various clinics, a Stop Smoking Program Guide was produced, providing ACS units with a clinical procedure on how to run a stop smoking group.

SPONSOR: California Division, American Cancer Society

HISTORY: As thousands of smokers over the last two years called ACS offices to help them stop smoking, the need for a program in smoking cessation became apparent. The Society, through its volunteer committee structure, established an initial one year committee to study it.

COVERAGE: STATE: The smoking cessation program has undergone basic development and testing in various institutional settings within California including Hillcrest Hospital, Petaluma (small town); Pacific Mutual Life, Los Angeles (industrial setting); Long Beach Memorial Hospital (large community hospital); Kaiser Health Center, Oakland (pilot smoking cessation program).

EMPHASIS: PREVENTION

MEDIUM: PRESENTATION: During the eight session smoking cessation program the leader guides the group through experiences to help them define and eliminate their smoking behavior. Experiences may include presentations, panel discussions and involvement exercises. etc.

BOOKLETS: Aids in clinical sessions include the "Smoker's Self Testing Kit." (Clearinghouse), "If You Want to Give Up Cigarettes." (ACS), plus paper and pencil tasks to locate social contingencies for smoker's habit.
The stop smoking program guide was designed as a training vehicle for ACS units to set up stop smoking programs.

VIDEOTAPES: Five half hour tapes developed (and aired on KCSM-TV, UHF in San Mateo, Ca., April 1971); they are available for training purposes.

AUDIENCE DIFFERENTIATION: Smokers

DURATION: The clinic lasts through eight planned sessions. Clinics have also been utilized in a year long project. The STOP SMOKING PROGRAM GUIDE, a booklet of the project, is still being distributed as a training tool to develop smoking cessation clinics.

PROGRAM OBJECTIVES: "To develop a replicable stop smoking guide which could be used as an aid to train individuals on how to plan, organize, conduct, and evaluate a smoking cessation program."

COST: $15,000, expended on staff, training, and evaluation.

OUTCOMES: Two hundred and fifty persons reached through clinics; 10,000 exposed to the ideas through TV, radio (initial play of the videotapes now designated for training purposes). It has been commonly found that nearly 80% of the original clinic participants are recidivist by four months after the program.

EVALUATION METHODOLOGY: A simple count was performed of those smokers exposed to the program. It was not specified how the follow-up was done, although an independent consultant is currently reviewing smoking rates.

PROJECT: "Leave It to Laurie." (Washington State)

CITATION: "Special Project - 'Leave It to Laurie.'" American Cancer Society Honors Citation Request, submitted by the Washington Division (of the Society); 1972.

ANNOTATION: The American Cancer Society in Washington State mobilized the skills of high school and college drama students to present "Leave It to Laurie", a play on smoking. This dramatic presentation, nested within a 3 day unit on the smoking problem, was seen by 34,000 students and teachers in the elementary and junior high schools throughout the state; it received testimonials regarding its effectiveness at bringing an anti-smoking message to this youthful population.

SPONSOR: Washington Division of the American Cancer Society; the Seattle Foundation.

HISTORY: "Leave It to Laurie" was written prior to its utilization in Washington but seldom used. The Washington Division, with financial assistance from the Seattle Foundation, developed a program for its use in the state's schools. A program followed in which college and high school drama departments were organized to stage the play at lower schools throughout the state.

COVERAGE: STATE: Washington.

EMPHASIS: PREVENTION - Both smoking and lung cancer cancer and other smoking related diseases.

MEDIUM: PLAY: "Leave It to Laurie," written by Lee Kalcheim of Plays for Living (for ACS).

AUDIENCE DIFFERENTIATION: Upper elementary and junior high students.

DURATION: The 30 minute play is included within a 3 day study unit on the problem of cigarette smoking.

PROGRAM OBJECTIVES: To reach all 5th through 9th graders in the State of Washington over a 3 year period with anti-smoking education that would impact upon the use of cigarettes among youth.

COST: $2,215.92 for travel expenses, meals, lodging and any production expenses for the teams of drama students who tour with the play. No. of ACS staff involved: 8-12; Total time: 1,056 hrs No. of volunteers: 350-400; Total Time estimate: 16,072 hrs.

OUTCOMES: 34,000 students and teachers exposed to the program over the 15 months, "extensive coverage in 24 of the 38 Division County Units." Testimonial evidence: "thank you" letters and from various schools to ACS suggest the program was well received.

EVALUATION METHODOLOGY: A simple count was taken of those persons exposed and of those counties in which programs are active. Testimonials from participants and the school audience were evaluated as indicators and useful feedback.

EXTRANEOUS/ CONTEXTUAL VARIABLES: The play was not presented in a vacuum but preceded by a study of the smoking problem and followed by a discussion of the play.

PROJECT: "The Big C" - A Two-Way Telethon to Save Lives

CITATION: Wolfe, R. B. "THE BIG C: A Two Way Telethon to Save Lives" American Cancer Society Honors Citation Application; submitted by the Philadelphia Division (of the Society), July 31, 1972. Telethon produced by H. Mintzer and aired on WTAF-TV (Jenkintown, Pa.), April 12, 19[illegible] from 10:30 P.M. until 1:00 A.M.

ANNOTATION: During a 2 1/2 hour late night telethon on a UHF station, viewers were exposed to a variety of live and filmed appeals, case histories, demonstrations and discussions. The major thrust was that "cancer can be cured, see your physician, call the American Cancer Society." Phone numbers were announced and while the show was on the air, volunteers manned the phones at 7 ACS offices within a 90 mile radius of Philadelphia, answering questions about cancer. Phones were kept busy at all offices throughout the show, as over 500 calls were taken.

SPONSOR: Philadelphia Division of the American Cancer Society and WTAF-TV.

HISTORY The program was requested by ACS as a way to inform the public of the curability of cancer when detected early and treated properly. The producer conducted a thorough study of ACS materials and many films. Films were prescreened by ACS and narrowed down to about 10-12 films. ACS and the producer held brainstorming sessions and agreed upon a statement of what the program might achieve.

COVERAGE: LOCAL: Philadelphia metropolitan area.

EMPHASIS: GENERAL EDUCATION
DIAGNOSIS

MEDIUM: TELEVISION: UHF-TV with prior press releases to increase audience size. The show format included film clips of celebrities, interviews with physicians, and personal case histories.

AUDIENCE
DIFFERENTIATION: Television viewers in the Philadelphia metropolitan area.

DURATION: Two and one half hours in the late evening.

PROGRAM OBJECTIVES: To deliver information to general audience, and thereby to encourage early detection of cancer.

COST: The cost to ACS was 60 hours of staff time plus $113.60 to cover transportation, flyers, and miscellaneous postage. To WTAF-TV, the cost was approximately $5,000 for a 2 and 1/2 hour program in this time slot, according to an estimate by the station.

OUTCOMES: Perhaps as many as 40,000 homes (80,000 viewers) reached. Over 500 phone calls were taken.

EVALUATION METHODOLOGY: The number of homes reached was estimated from a recently surveyed 11-11:30 p.m. time slot. Phone calls taken at ACS offices kept all lines busy during the entire program.

PROJECT: Sioux Indian Cancer Control Project

CITATION: "Sioux Indian Cancer Control Project" South Dakota Division of the American Cancer Society.

ANNOTATION: The Sioux Indian population of South Dakota seldom had been reached by cancer education prior to 1972, though cancer is the third highest cause of death among this population. The program, under the direction of a committee representing the nine local Sioux tribes, chose priority cancer sites and appropriate literature to be distributed. Community Health Representatives contacted the public with primary education. In the year 1972-73, over 4000 Indian people were reached, and Pap screening clinics were set up in several local areas.

SPONSOR: South Dakota Division, American Cancer Society

HISTORY: In evaluating its cancer control programs, the American Cancer Society (S.D. Div.) determined the population of 33,000 Sioux Indians within the state were not being reached with the cancer control message. The Division's Public Education Committee in February 1971 recommended that contact be made with Sioux Tribal Chairmen (there are 9 different Sioux tribes in the state). A study of the 1970 U.S. census figures indicated that there are Sioux Indians living in all of South Dakota's counties, suggesting that a division wide program was appropriate. In cooperation with the tribal Chairmen, Indian Public Health Service, and Indian Community Health Representatives a nine member Indian Sub-committee (to the Public Education Committee) representative of the 9 tribes was formed. At the Indian Sub-committee's first meeting in August of 1972 priority sites of uterine, breast, lung, and colon rectum cancer were selected as target areas, and program planning was begun.

COVERAGE: State: South Dakota

EMPHASIS: GENERAL EDUCATION
PREVENTION SCREENING

MEDIUM:

PRESENTATION: Group educational meetings were first tried, but were not very successful in the early beginning of the program. The Community Health Representatives (Indian Health Service trained counselors) have found that an initial one-to-one visit with a brief explanation of issues emphasized has sparked enough interest to motivate the individual to attend an educational program.

BOOKLETS: ACS materials were selected by committee members that were thought to be appropriate for their people. (Titles unspecified)

AUDIENCE DIFFERENTIATION: Sioux Indians within South Dakota

DURATION: An ongoing program, it began in 1972. "The goal and purposes of the Division in this program is long range, and will remain a goal as long as there is a need to reach people with the cancer control message."

PROGRAM OBJECTIVES: To reach Sioux Indian people with the cancer control program. The 1972/73 objective of the Indian Subcommittee was to conduct cancer control programs with emphasis on uterine and lung cancer to reach at least 50% (or 16,500) Sioux Indians in South Dakota during fiscal 1973/74. South Dakota's urban Indians have been more difficult to reach. A more concentrated effort will be made to reach this population of about 2000 Indians.

COST: Designated as minimal, though not explicitly specified.

OUTCOMES: In ACS fiscal 72/73, 4200 Sioux Indians have been contacted with programs and information. There have been 13,200 pamphlets distributed. Pap clinics have been started in Sisseton, Wagner, Standing Rock, Crow Creek, and Pine Ridge areas as a result of the Cancer Control Program (costs absorbed by the Indian Health Service).

EVALUATION METHODOLOGY: Count of those exposed to programs. Other outcomes are health system changes occurring subsequent to the educational program.

PROJECT: Elementary School Health Curriculum Project

CITATION: "Supplementary Information on 'Elementary School Health Curriculum Project'." Project Officer: Roy L. Davis, Chief of Community Program Development Branch, National Clearinghouse for Smoking and Health, 5401 Westbard Avenue, Room 500, Bethesda, Maryland 20016.

ANNOTATION: The project trains teams of classroom teachers in use of a health curriculum for 5th, 6th, and 7th grades including the lungs and respiratory system, heart and circulatory system, and brain and nervous system respectively as subject matter. The curriculum, which emphasizes understanding and appreciation of the body and developing skills for prevention of disease, has been provided to over 50 school districts throughout the United States, and has generally been regarded as valuable by participating educators.

SPONSOR: National Clearinghouse for Smoking and Health

HISTORY: The "health curriculum model" was initially developed under a 3-year contract with the San Ramon Unified School District in California. It consists of three intensive units of study - one each at the fifth, sixth, and seventh grade levels. A "teacher training model" emerged simultaneously. Essentially it involves two weeks in-depth training of teams of classroom teachers and administrators.

COVERAGE: NATIONAL: The curriculum and requisite teacher training has spread to school districts throughout the U.S. Five states - Washington, California, New York, Illinois, and West Virginia - and over 25 teams of teachers in the schools of Seattle, Los Altos, Berkeley, San Mateo, Champaign, Charleston, Syracuse, Delmar, and Camillus were involved in this education for health endeavor.

EMPHASIS: GENERAL EDUCATION
The first year teacher training and subsequent pupil study deals with the Lungs and Respiratory System at the fifth grade level, the second year the training is for sixth grade teams on a unit dealing with the Heart and Circulatory System and the third year's training is for seventh grade teams on the Brain and Nervous System.

MEDIUM: A wide variety of classroom education techniques and resources, material and human, are used throughout the curriculum. Classroom resources include primary models, filmstrips, films, texts, charts, and tapes.

Monitoring by central training staff and Clearinghouse staff are maintained on a regular basis at each site after the initail training. A communications system among all trainees has also been developed.

AUDIENCE DIFFERENTIATION: Students in 5th through 7th grades. Their teachers are trained in small teams for curriculum presentation.

DURATION: The combined curriculum is to last 3 years, 5th through 7th grades for each student. Initial in-depth training for teams of classroom teachers and administrators is 2 weeks in length (with teams reconvening for a followup session 9 months after training). For 6 years the National Clearinghouse for Smoking and Health supported the development and dissemination of this project.

PROGRAM OBJECTIVES: A primary objective has been to establish two successful classroom examples of each unit at its grade level in one school of a district. A second major objective has involved conversion of each district (group of teams) into a training center for teams from other schools in the geographic area. A third concern has involved exploration and development of effective ways for gaining and maximizing local community support (dollars and resources) from schools, official and voluntary health agencies, professional groups, parents, etc.

With regard to the curriculum itself, the emphasis is on working toward the basic objectives on education, developing understanding and appreciation of the body and skills for prevention of diseases well as encouraging youth to make their own sound decisions about personal and environmental factors that affect health.

COST: Costs for a district team (5 people) to be trained in order to operate for the first year on the particular unit are typically based on the following 1. Travel to and from training; 2. Per diem expenses at training; 3. Stipend of $150; 4. Materials for two classrooms -- $2,000; 5. Travel and expenses to a 2 day reconvening session. Similar costs exist for the second and third year teams. The materials serve

additional teachers (up to 6 or 8 classrooms) after the first year. These expenditures on the part of school districts have been funded in large part by a variety of federal and other agencies interested in such curriculum development. This estimate, of course, does not cover costs of this (or any given) curriculum once instituted in a school system. The cost of the entire effort on the part of the Clearinghouse in unspecified.

OUTCOMES: Teachers from over 50 school districts have already been trained for utilization of the curriculum units. Almost without exception, teachers, administrators, youth, parents, and community health leaders who have been involved see this project as highly supportive and helpful in order to improve teacher training, education for children, and health curriculum implementation.

EVALUATION METHODOLOGY: The outcome above is simply a count of participating school districts, and informal testimony of participating personnel.

PROJECT: A Pilot Program in Health Education Related to the Hazards of Cigarette Smoking

CITATION: Sadler, Muriel. "A Pilot Program in Health Education Related to the Hazards of Cigarette Smoking." THE RHODE ISLAND MEDICAL JOURNAL. 52:36-8, January 1969.

ANNOTATION: An attempt was made to influence the smoking attitudes and habits of sixth graders through classroom education. Physicians presented evidence linking smoking and cancer. In questionnaires administered one year later, those students who had been subjects in the program exhibited no significant difference from students who had not been involved.

SPONSOR: The Rhode Island College of Education and the East Providence School District.

HISTORY: The conclusion drawn from earlier studies on the ineffectiveness of anti-smoking campaigns among adults motivated these attempts to prevent or change behavior at an early age.

COVERAGE: LOCAL - East Providence, Rhode Island

EMPHASIS: PREVENTION - To combat the problem of youth who are acquiring the smoking habit.

MEDIUM: A presentation was made by a visiting physician that included the use of slides, specimens of cancerous and healthy tissue, and other unspecified visual aids.

AUDIENCE DIFFERENTIATION: One sixth grade class of eleven year old students were the participants in an experimental group.

DURATION: 4 weeks

PROGRAM OBJECTIVES: The program was designed "to educate students on the hazards of smoking and...to develop in these students an antipathy toward the smoking habit."

COSTS: Not specified

OUTCOMES: None - those students (130 participated, 125 measured) who participated in the program did not differ significantly in either habits or attitudes from a control group (144), as indicated by questionnaires administered a year later.

EVALUATION METHODOLOGY: Pretest-postest questionnaires were given to those students in the program, with a lapse of one year in between; the control group received only the postest.

EXTRANEOUS/ CONTEXTUAL VARIABLES: The vast majority of participants believed that smoking is harmful to their health (over 90%) and may cause lung cancer (over 70%). Interest in smoking was caused primarily by friends in 67% of those tested. However, the primary reason for smoking was social, according to 49%.

PROJECT: The Anti-Smoking Commercials: A Study of Television's Impact on Behavior

CITATION: O'Keefe, M.T. PhD. "The Anti-Smoking Commercials: A Study of Television's Impact on Behavior. THE PUBLIC OPINION QUARTERLY. 35,2: 242-8. Summer 1971.

ANNOTATION: Measures were taken on a Florida population to see if they felt affected by anti-smoking commercials. Non-smokers saw the commercials as more effective than smokers, suggesting that the commercials might actually reinforce ongoing non-smoking behavior. Non-smokers and ex-smokers do say that possible illness is a major deterrent to their smoking.

SPONSOR: Anti-smoking ads were promoted by various health organizations; research was supported by the Journalism Division, Florida Technological University, Orlando, Florida.

HISTORY: Communication research has reflected a belief in the persuasive power of the media. However, attitudes are hard to change, and the media may just reinforce ongoing behavior. The anti-smoking campaign of the 1960's was an opportunity to test this hypothesis.

COVERAGE: REGIONAL - Central Florida area of Orlando

EMPHASIS: PREVENTION - Anti-smoking

MEDIUM: TELEVISION

AUDIENCE DIFFERENTIATION: Two groups made up of smokers and non-smokers were divided on the basis of age, which included those in school and non-students.

DURATION: Cumulative results over a period of ten years of anti-smoking advertising were measured.

PROGRAM OBJECTIVES: For anti-smoking advertising - to decrease smoking behavior in the general population.

COSTS: Not specified

OUTCOMES: Non-smokers did indeed perceive the anti-smoking campaign as more effective. Those persons who said they wanted to quit smoking also perceived that the commericials had influenced their smoking habits. It

was also discovered that 50% of non-smokers, including ex-smokers, said they didn't smoke because of possible ill effects, although they did not credit commercials for this knowledge.

EVALUATION METHODOLOGY: Questionnaires were sent to students in junior high school and high school, and college classes; a random telephone survey was made on the general population, the sample including 621 students and 300 general population.

PROJECT: Control of the Cigarette Habit by Psychologically Aversive Conditioning: A Clinical Evaluation in 53 Smokers

CITATION: Ochsner, A. M.D., and Damrau, F. M.D. "Control of the Cigarette Habit by Psychologically Aversive Conditioning: A Clinical Evaluation in 53 Smokers." JOURNAL OF THE AMERICAN GERIATRICS SOCIETY. 18,5: 365-9. May 1970.

SPONSOR: Physician's own clinics.

HISTORY: Given that smoking causes cancer and that advertising trains positive associations to smoking, the project originators wanted to train negative associations in smoking.

COVERAGE: LOCAL - The program was directed to patients through clinics in New Orleans and New York.

EMPHASIS: PREVENTION - To reduce or eliminate smoking.

MEDIUM: BOOKLET - Composed of 21 pages, it included distinct warnings and negative associations to smoking.

AUDIENCE DIFFERENTIATION: Primarily, it was made up of risk smokers.

DURATION: 3 weeks

PROGRAM OBJECTIVES: To stop or decrease smoking among participants. The participants were all desirous of quitting and agreed to read the booklet each time he or she smoked during the treatment period.

COSTS: Not specified

EVALUATION METHODOLOGY: The rate of smoking in comparison to the base rate was taken during the last three days of treatment. There was no followup on the participants, however.

PROJECT: A Study of the Effectiveness of Alternative Mass Distribution Leaflets

CITATION: "A Study of the Effectiveness of Alternative Mass Distribution Leaflets." Lieberman Research, Inc. June 1967.

ANNOTATION: This study involved an analysis of four leaflets which represented different ways of communicating cancer signals. Leaflets were distributed by volunteers in six cities. Results indicated some test leaflets were successful in improving the public knowledge of cancer signals.

SPONSOR: American Cancer Society

HISTORY: Not known

COVERAGE: NATIONAL The study was conducted in six cities: New Haven, Connecticut; Philadelphia, Pennsylvania; Baltimore, Maryland; Richmond, Virginia; Cincinnati, Ohio; Los Angeles, California

EMPHASIS: PREVENTION

MEDIUM: PAMPHLET

AUDIENCE DIFFERENTIATION: None (General Audience)

DURATION: 1967 Crusade for Cancer Campaign

PROGRAM OBJECTIVES: To increase the public's knowledge of cancer signals - and to evaluate the effectiveness of different pamphlets.

COST: Not specified

OUTCOMES: Test leaflets were somewhat successful in improving people's knowledge of cancer signals. More people read the pamphlet if they felt ACS volunteer was personally involved with ACS. Less educated people and men were contacted

less frequently than other groups. Among less educated people who received the pamphlet, however, individuals were as likely to read it as better educated. Men, however, did not read pamphlets even if they received them.

EVALUATION METHODOLOGY:

The study involved an analysis of four leaflets. Three were test leaflets which represented different ways of communicating cancer's signals. The fourth was a control leaflet which made no mention of cancer's signals. Two of the leaflets were divided into two forms. In one form, the phrase "warning signals" was used. In the other form, the phrase "danger signals" was used. Volunteers in each of the six cities were divided into six groups. Each group distributed a different leaflet. Volunteers were also given postcards keyed to leaflets, were instructed to fill in names and addresses of people receiving leaflets, and were told to mail postcards on the same day leaflets were distributed. Upon receipt of the postcards, interviewers contacted leaflet recipients by telephone. Contacts were generally made three to seven days after leaflets were received by respondents. 71% of the respondents were contacted.

EXTRANEOUS/ CONTEXTUAL VARIABLES:

Possible interference from other information sources during campaign.

PROJECT: A Study of the Effectiveness of Film Programs Used in the American Cancer Society Public Education Program

CITATION: "A Study of the Effectiveness of Film Programs Used in the American Cancer Society Public Education Program." Lieberman Research, Inc. July 1969.

ANNOTATION: This study evaluates the effectiveness of three of the ACS' film programs, and provides guidelines for future film programs which may be developed.

SPONSOR: American Cancer Society

HISTORY: Not known.

COVERAGE: NATIONAL Cities participating in the study were: Buffalo, New York; Harrisburg, Penn.; Rochester, New York; Atlanta, Georgia; Dallas, Texas; Washington, D.C.; Ft. Wayne, Indiana; St. Louis, Missouri; Toledo, Ohio; Los Angeles, California; Oakland, California; Denver, Colorado

EMPHASIS: PREVENTION
DIAGNOSIS

MEDIUM: FILM
PAMPHLET

AUDIENCE DIFFERENTIATION: Two of the films were directed at women and one at both men and women.

DURATION: Not specified.

PROGRAM OBJECTIVES: The objective of "Million Club" was to get men and women to go for a general check-up and to recognize cancer danger signals; that of "Breast Self-Examination" was to get women to perform breast self-examination; that of "Time and Two Women" was to explain uterine cancer and to get women to go for a Pap test.

COST: Not specified.

OUTCOMES: Two films, "Breast Self-Examination" and "Time and Two Women" were somewhat successful in getting women to perform the desired behavior. "Million Club" did increase knowledge of cancer signals but was not successful in getting people to go for general check-ups.

EVALUATION METHODOLOGY: Film programs were tested under natural viewing conditions. Three series of measurements were obtained -- one before a film was shown, a second immediately after a film was shown, and a third 30 days later. The later measurement enabled researchers to determine if behavioral changes took place. Each test audience was split into two groups. One group was asked a series of test questions before the film program was shown. The other group was asked the same series of questions after the film. Respondents were not aware that they were divided into different groups. About 30 days later, respondents were mailed a questionnaire to fill out. Final analysis was based on a total of 1,905 respondents, including 1,356 "test" respondents and 549 "control" respondents. In cases where questionnaires were returned incomplete, the respondents were eliminated. In cases where people did not return a completed questionnaire for the one-month follow-up interview, they were also eliminated.

PROJECT: American Cancer Society Television Show - "Breast Cancer: Where We Are"

CITATION: "Breast Cancer: Where We Are". Lieberman Research, Inc. American Cancer Society, Inc. 1973.

ANNOTATION: This half-hour television documentary examines current attitudes towards breast cancer, shows recent diagnostic techniques and includes a live model demonstrating the technique of breast self-examination.

SPONSOR: American Cancer Society

HISTORY: Not known.

COVERAGE: NATIONAL

EMPHASIS: PREVENTION
DIAGNOSIS
TREATMENT

MEDIUM: TELEVISION Half-hour documentary.

AUDIENCE DIFFERENTIATION: General audience

DURATION: Film lasts one-half hour. Program was scheduled to be run during the month of April, 1974.

PROGRAM OBJECTIVES: The show is designed to increase women's knowledge about the effectiveness of current breast cancer treatment, given early diagnosis. It encourages women to perform breast self-examination and to seek early treatment if any of the cancer signals are apparent.

COST: Not specified.

OUTCOMES: (Data not yet available.)

EVALUATION METHODOLOGY: Not specified.

PROJECT: CAN-DIAL

CITATION:

ANNOTATION: The CAN-DIAL system offers the general public taped messages over the telephone covering a wide variety of cancer subjects. The CAN-DIAL library currently holds 26 tapes. Cancer information questions are answered anytime from 8 a.m. to Midnight, seven days a week.

SPONSOR: Roswell Park Memorial Institute

HISTORY: The project began in September, 1973. The current NCI contract supporting program evaluation began on April 1, 1974.

COVERAGE: NATIONAL There is no limit on the coverage. However, the cost of long distance phone calls probably limits the actual coverage to a local area.

EMPHASIS: PREVENTION

GENERAL EDUCATION

Tapes include the following titles:

1. What is Cancer?
2. Cancer's Warning Signals.
3. Cancer of the Breast-and How to Detect It.
4. Lung Cancer.
5. If You Want To Give Up Cigarettes.
6. Cancer of the Larynx.
7. Cancer of the Uterus.
8. Cancer of the Skin.
9. Cancer of the Colon and Rectum.
10. Leukemia.
11. Cancer of the Mouth.
12. Service and Rehabilitation Information for Cancer Patients and Their Families.
13. Chemotherapy: Drugs vs. Cancer.
14. Cancer of the Bladder.
15. Cancer of the Prostate.
16. Cancer of the Bone.
17. Cancer of the Stomach.
18. Cancer of the Brain.
19. Hodgkin's Disease.

20. Cigarette Smoking and the Pregnant Woman.
21. Cigarette Smoking and Dental Problems.
22. What is the Pap Test-How Can It Help You?
23. What is the Roswell Park Memorial Institute?
24. Radiation Therapy in Cancer Treatment.
25. Words From a Hospital Chaplain.
26. The Effects of Cigarette Smoking on the Non-Smoker.

These messages are from one to seven minutes long, are presented in easy-to-understand language, and are carefully screened by a panel of physicians.

MEDIUM: OTHER AV Telephone, Taped Messages
A "saturation type" advertising program was planned for CAN-DIAL - a statewide effort with a concentration in the eight western most counties surrounding Erie County. The CAN-DIAL system was introduced to this western area of New York State through all media, and with press conferences; the two-month introductory period was a very intense advertising period.

AUDIENCE DIFFERENTIATION: General audience

DURATION: The program began in September, 1973 and is still in operation. The NCI contract extends from April 1, 1974 - March 31, 1976.

PROGRAM OBJECTIVES: To provide the public with preventive cancer information, to help people recognize the seven early warning signs of cancer, and to answer common questions about the disease.

COST: The project director estimates that the program could run from $15,000 (operators, telephone setup, printing, etc.) to $150,000 if evaluation, etc. is included.

OUTCOMES: Evaluation results will not be vailable until the end of 1974. However, the program director states that currently they know that:

1) The response is directly correlated with the amount of publicity. Television exposures are best.
2) The public respond to high risk cancer diseases, particularly:
   a. Lung cancer.
   b. How to Stop Smoking.

c. Breast Cancer.
d. Colon-rectum Cancer.
e. What is Cancer.
f. Cancer's Warning Signals.

EVALUATION METHDOLOGY:

The following is Dr. Saxon Graham's proposed research design.

"We estimate that we will need to take samples of callers at five intervals throughout the first year; a sample of 400 at each interval would be useful. These individuals would be telephoned and interviewed to ascertain where they heard about the program, what made them make their call, what they hoped to gain from the call, how they felt the tapes and the entire procedure could be improved, what services they would like to see added and what action they had taken as a result. In addition, they should be asked questions suggested by earlier research in factors relating to participation in new programs. A small body of research on the acceptors as compared to rejectors of such innovations indicates hypotheses to be tested. For example, we would hypothesize that callers would be more likely than noncallers to have contact with many mass media, friends in the health field, children living at home, higher education, an orientation towards health and preventive behavior, and other traits found to characterize acceptors in the past.

Callers should be compared with other individuals in the population to learn why they have not called: to determine whether the Noncallers have not been informed of the program, the kinds of mass media they use and do not use, their interest in health, preventive behavior and the like. Comparing the Callers and Noncallers will be useful in planning future information campaigns designed to increase the number of individuals who utilize CAN-DIAL. To this end, a random sample of phone numbers of private homes will be called at the same time and by the same interviewers as the samples described above. Thus, there will be five waves of 400 individuals reached as part of the random sample in the first year. If the random sample has been informed of the program via mass media or other means, feels a need for the information available, and has not utilized CAN-DIAL, we will be particularly interested to discover why. Moreover, we can assess whether there is a need to try other types of mass media, other means of contact, and different kinds of messages.

The third facet of the research will be to do follow-up interviews no sooner than 60 days and no later than three months after the Caller used CAN-DIAL to ascertain actual action taken in response to information obtained. We would interview Callers throughout the year starting two months after they had originally called and at intervals thereafter for a total of 2500 telephone interviews per year. 1250 of these interviews would be persons described in the first paragraph. Questions to be asked would have to do with whether action had been taken subsequent to making the phone call; whether they had stopped smoking, undertaken breast self-examination, obtained a Pap smear, informed their friends or whether they had attempted to help friends with regard to a cancer problem. In addition, we would want to obtain information as to why they had not taken action, if they had not, as well as other characteristics, such as orientation towards health, access to mass media, access to expert consultation and the like.

In the second year of the program substantial time would be devoted to analysis of results. Data gathering would be reduced by 50%. It would be used for monitoring the experience encountered in the ongoing utilization of CAN-DIAL. Towards the end of the second year, we would, on the basis of our inquiries, design research to answer any new questions which have arisen."

A preliminary evaluation questionnaire is on file.

PROJECT: Sack Lunch Employee Education Program

CITATION: Personal correspondence. Knappe, Mrs. Mildred E. Executive Secretary. ACS, Linn County Chapter.

ANNOTATION: This sack lunch program attempted to reach employees working in small offices who would not otherwise be exposed to American Cancer Society education. Participants brought sack lunches, watched a film, listened to the message from an ACS volunteer, and then engaged in a question and answer period.

SPONSOR: Linn County, Iowa Chapter of the American Cancer Society

HISTORY: The program was begun in response to the need to get programs about cancer into business and industry. Program planners were very flexible as to time segment and length of time for program, working at the convenience of both employers and employees. Planners also maintained flexibility in tailoring program content to fit the audience.

COVERAGE: LOCAL Linn County, Iowa

EMPHASIS: PREVENTION

MEDIUM: FILM "Time and Two Women"
"Time to Stop Is Now"
"The Million Club"
"The Winners"
INTERPERSONAL

AUDIENCE DIFFERENTIATION: A general audience participated.

DURATION: The program lasted approximately five years, from November 1968 to 1973.

PROGRAM OBJECTIVES: To reach employees working in small offices who would not otherwise be exposed to American Cancer Society education. The program encouraged individuals to have regular check-ups and attempted to make them aware of the seven warning signals.

COST: Two volunteers provided 400 hours of time to develop and conduct the program. There was no monetary cost to the ACS.

OUTCOMES: 3709 people were reached. There was at least one instance where medical help was sought as a result of the program and cancer diagnosed at a curable stage.

EVALUATION METHODOLOGY: No formal evaluation was done. Success of the program was measured by unsolicited feedback of favorable comments.

PROJECT: Poster Contest on the Health Hazards of Smoking

CITATION: Minnesota Poster Contest on the Health Hazards of Smoking. ACS, Minnesota Division, Inc. 1974.

ANNOTATION: The Poster Contest on the Health Hazards of Smoking is a state-wide effort, created by the Minnesota Division of the American Cancer Society, to encourage students in the lower grades through high school not to smoke. The program encourages students to create an original poster or slogan on the threat of smoking to health.

SPONSOR: American Cancer Society, Minnesota Division

HISTORY: "Recognizing the need for development of new ways to influence young people not to smoke, the Minnesota Division Public Information Committee created a Poster Contest on the health hazards of smoking. The targets of this plan are Twin Cities business establishments and also at the Minnesota State Fair. The first and second place posters are printed commercially by firms donating this work, and 10,000 copies are distributed to all schools in the state, both as an educational venture and to encourage students to enter the next year's event. The remaining posters are returned to each school, with the suggestion that the posters be placed on display at public places in the community."

COVERAGE: LOCAL Minnesota

EMPHASIS: PREVENTION - The program encourages people to stop smoking.

MEDIUM: POSTERS The publicity for this contest also includes press releases to the media, news photos of state winners released to hometown papers, and personal appearances by the eight contest finalists on several Twin Cities radio and television stations.

AUDIENCE DIFFERENTIATION: AGE Contestants must not have reached the age of 19 before the contest closes.

DURATION: The program was originated in 1966 and is repeated every year. The contest begins on January 15 and entries must be in by April 1.

PROGRAM OBJECTIVES:

"1. To reach a maximum number of young people statewide with an attention-getting message on the health hazards of smoking.
2. To involve the Society's volunteers and schools in this activity.
3. To employ a poster contest as a vehicle for this effort.
4. To develop interest through the competitive aspects of the contest plan.
5. Ultimately, to persuade young people not to smoke.
6. To encourage adults as well to kick the habit by giving extensive publicity to the contest program."

COST: Not specified

OUTCOMES: The number of entries varies from 3500 to 5500. Entries are received from approximately 70% of Minnesota's counties.

EVALUATION METHODOLOGY: County Unit Public Education Chairmen and Public Information Chairmen of the American Cancer Society are contacted for their help in organizing the contest. The Chairman is asked to contact the principals of elementary and secondary school systems, school nurses, and art instructors or health teachers and advise them of the contest. Parochial and public schools are included. The American Cancer Society also applies for approval of the contest by the Minnesota Association of Secondary School Principals Associations Contest Committee. County Units also encourage local contests. No attempt was made to determine how effective the program actually is in gettng young people and adults to quit smoking.

PROJECT: Indian Health Service "Community Health Representatives"

ANNOTATION: The Community Health Representative (CHR) Program provides an individual from a tribe or tribal council with basic health and community organization skills. Depending on their tribe and on their own interests, the CHRs are also given training in subjects of their choice, usually related to the needs of the tribe. This allows the program considerable flexibility in meeting the health needs of different tribes.
The principal topics of interest center around basic health problems and topics like family planning and birth control. In the advanced training program the importance of pap tests and breast self-examination are taught. The Desert Willow staff offer the following ideas on the considerations necessary in cancer education:

1) The Indian population is extremely diverse. There are no generalizations that can be made about all tribes. Family structures, medical philosophy, etc. are so different between tribes that no one single approach to the problem will be adequate. Indians face many problems encountered by other ethnic minorities in addition to the unique problems they face as Indians.
2) Transportation is a very real problem on reservations. Distances are great and communications are very poor.

A successful program would require:

1) that medical terms and information be translated into the native language,
2) that the community family structure be taken into consideration,
3) that educators be aware of the medical decision-makers in the community, and
4) that the various philosophies of medicine existing in the community be understood.

HISTORY: The program is unique in the history of the Indian Health Service's relationships with Indian tribes. Genuine participation by Indians has been lacking in many health programs. Previously, the majority of decisions concerning the health needs of the Indian people were made by the staff of the Indian Health

service, and involvement took the form of approving those decisions. The CHR program is designed to change these relationships and to provide a locus of independence for the Indian people.

COVERAGE: NATIONAL - Primarily the Southwestern United States, also Portland, Oregon, and South Dakota.

EMPHASIS: GENERAL EDUCATION

MEDIUM: INTERPERSONAL

AUDIENCE DIFFERENTIATION: American Indians of all ages and different tribes.

DURATION: Ongoing since early 1970's

PROGRAM OBJECTIVES: To satisfy "(1) the need for greater involvement of American Indians in their own health programs and greater participation by Indians in the identification and solving of their own health problems; and (2) the need for greater understanding between the Indian people and the Indian Health Service staff."

COST: Not specified.

OUTCOMES: A review of the FY 73 CHR Program reported a total of 320 trainees attended basic training and 42 attended a special class in South Dakota. A total of 179 trainees received advanced training, 63 of which attended Desert Willow, the rest receiving instruction in their home areas. 718 trainees were counted serving a population of almost 450,000 people during 1973.

EVALUATION METHODOLOGY: Population data and personnel statistics have been gathered by the Indian Health Service and the Desert Willow Training Center.

PROGRAMS EMPHASIZING SCREENING OR DETECTION

PROJECT: Geriatric Cancer Screening (Mobile Unit)

CITATION: Lynch, H. "A New Approach To Cancer Screening And Education." GERIATRICS, May 1973, 152-157.

ANNOTATION: A mobile cancer detection unit has been bringing early diagnostic help to communities. It is especially directed at older people who are higher risks and less likely to seek early diagnosis on their own. There has been some sucess in spotting malignancies in early stages. Cancer education is also included as an additional service of the program.

SPONSOR: Creighton University (Omaha, Nebraska); and the Nebraska Regional Medical Program.

HISTORY: One-half million persons died of cancer in 1972. It is estimated that early diagnosis would have saved one third of these. This program evolved in order to promote and make early diagnoses of cancer.

COVERAGE: LOCAL: 3,040 men and women screened in eight separate communities (presumably near Omaha).

EMPHASIS: PREVENTION
DIAGNOSIS: These included ways to avoid excessive sunlight exposure to sensitive skin, cigarette smoking control, and instruction in oral hygiene. Instruction for women in breast self examination was provided.

MEDIUM: PRESENTATION: Instruction by physician and medical staff was given; the nature of the written or visual aids was not specified.

AUDIENCE DIFFERENTIATION: Though there was no attempt to limit service to a particular population, the mean age was 60 for men and 56 for women, generally a lower socioeconomic population (determined in part by the neigborhoods chosen for locating the mobile screening unit).

DURATION: 1971 and 1972

PROGRAM OBJECTIVES: Primary: "to reduce inordinate delay in cancer diagnosis and to emphasize the value of examining allegedly well and healthy persons," to diagnose cancer while still localized in the organ of origin;

Secondary: To provide a means of educating the aged and lower socioeconomic groups with a mobile unit.

COST: Unspecified

OUTCOMES: Outcomes of educational function not specified. Sixty-four malignancies diagnosed.

EVALUATION METHODOLOGY: A simple count and follow-up of the malignancies detected was done.

EXTRANEOUS/ CONTEXTUAL VARIABLES: Mention was made of gaining the "enthusiastic support and volunteer assistance" of various local service and charitable organizations. The nature of the public education efforts of these groups is unspecified.

PROJECT: Experimental Cytology Program (Kegeles)

CITATION: Kegeles, S. "A Field Expermintal Attempt To Change Beliefs and Behavior of Women In An Urban Ghetto." JOURNAL OF HEALTH AND SOCIAL BEHAVIOR 10, 115-124, June 1969.

ANNOTATION: A field experiment to influence black women in metropolitan precincts to visit a clinic for a cytology test. Results indicate the information provided on vulnerability to cervical cancer and the value of the cytology test increased the desired behavior among women, all of whom were given encouragement and appointments for the clinic. The additional behavior did not, however, affect the women's relevant beliefs.

SPONSOR: Public Health Service, Division of Community Services

HISTORY: It has often been suggested that there is little correspondence between efforts to change behavior in the laboratory and in the field. The present research was designed to change attitudes and behavior directly within the field.

COVERAGE: LOCAL: a single census tract in a medium size metropolitan area in the vicinity of the University of Michigan.

EMPHASIS: SCREENING - Cytology for early detection of cervical cancer.

MEDIUM: PRESENTATION: By community worker
PRINT: appointment card, coupon for taxi, letter from OEO community center director.

AUDIENCE DIFFERENTIATION: Black women, 25-55 years of age.

DURATION: Single presentation to each woman.

PROGRAM OBJECTIVES: In particular to convince women to take a cytology test; more generally an experiment to test the effectiveness of information relating to vulnerability, the effectiveness of cytology, and the value of early diagnosis as motivators to convince women to take the test.

COST: Unspecified.

OUTCOMES: Sixty-four per cent of the total number of subjects made appointments, 35% actually came. Approximately equal numbers of experimental and control groups made appointments, but twice as many experimental subjects (those given the information of motivational relevance) actually came. Pre-test differences had no effect. There were post-test differences in vulnerability although they were not large. There was no effect on the program on beliefs.

EVALUATION METHODOLOGY: Experimental and Control groups of 35 women each. Both groups received a description of the cervical test, and were told the time and location of the clinic, as well as being urged to make an appointment. They were also given taxi fare. Only the experimental group was given the information regarding vulnerability, test effectiveness, and the value of early detection. Groups were pre-interviewed about perceived vulnerability and paths to avoid cervical cancer. One week later the influence attempt occurred during a visit by another aide. The post-interview (with the same questions asked as in the pre-interview) was administered when the subjects arrived at the clinic, or at home if they were unable to come.

PROJECT: The Community Cancer Detection Project in Florida (Cervical Screening)

CITATION: Fulghum, H. E. CERVICAL CANCER DETECTION THROUGH CYTOLOGY: A PUBLIC HEALTH APPROACH Florida state Board of Health, Monograph Series No. 11; Jacksonville, Florida, 1967.

ANNOTATION: This cervical cancer screening program included the study of 10,174 patients in the state of Florida during the years 1960-1963. Each of these women was a recipient of Aid to Dependent Children. About 70% of the women were nonwhite (primarily black). A variety of techniques - letters, the recruitment of opinion leaders, and group meetings - were utilized to promote participation in the screening program. These techniques were modified as necessary to meet local population characteristics, a fact which aided in reaching such a large number of women in this high risk population.

SPONSOR: Florida State Board of Health (with support provided by a special grant from the U.S. Public Health Service).

HISTORY: Combining the benefits and advantages from an evaluation of past successful programs (Floyd County, Ga., Memphis, Tenn., Jacksonville and Miami, Fla. cited) with the desire to study a particular socioeconomic group having little knowledge of cervical cancer, a cytology program was tentatively planned for Florida. As far as could be determined, this was to be the first survey of a selected group which had been planned and implemented for an entire state.

Medically indigent women living in an unfavorable socioeconomic environment have an above average susceptibility to uterine carcinoma. A project to locate the women of such a particular group and to work with them in a mass screening program for cervical carcinoma was envisioned for Florida.

COVERAGE: STATE: 19 of the 67 counties in the state. These counties contained 82% of the state's total population and 71% of the state's ADC recipients.

EMPHASIS: SCREENING
DIAGNOSIS

MEDIUM: Conduct of the project in a county followed a pattern (with some flexibility). Health department staff nurses and caseworkers in the welfare district reviewed a listing of the women in the county who were on ADC assistance. These were grouped according to geographical area. Routine correspondence was often prepared for each distinct county or geographical area, consistent with reading ability and other characteristics of the local target population. Personal contact proved to be the most effective means of encouraging women in the county to take advantage of the service. All of the women were not reached due to limitations in the number of staff in the local health department and welfare district.
The local staff of the project realized that many thought patterns so firmly ingrained in this particular group of women could not be altered within the time allotted. All activities were, therefore, specific--designed to motivate the women to obtain a Pap smear. The public news media were not utilized.

AUDIENCE DIFFERENTIATION: Women receiving Aid to Dependent Children (ADC) in Florida were the targets for the the program. Black women represented 70.5% of those eligible and 74.2% of those who were ultimately examined. The greatest cooperation with the study was among white women, aged 45-59, and non-white women over 45. The typical individual receiving ADC was about 37 years old with 3 children for whom she was unable to provide the minimum necessities. The father was not present in the home. Usually the mother had received only limited and often inadequate medical care.

DURATION: 3 years, from 1960-1963.

PROGRAM OBJECTIVES: The major purposes and objectives of the project were:

1. Testing the practicability of screening for cervical cancer a large number of women dependent upon public assistance for medical care, and of obtaining the necessary follow-up treatment in the event of positive diagnosis.

2. Initiation of a public health program designed to save many patients who were at the age of the greatest value to the community and who had the respnsibility for the care of many children.
3. Demonstration of the feasibility and benefits of routine Pap smears, thereby stimulating wider utilization of this diagnostic test by the local physicians in private practice throughout the state.

The primary purpose of the educational program was to influence behavior.

COST: Not specified.

OUTCOMES: During the period from 1960 to 1963, 2,618 white and 7,556 non-white women were screened; 409, or 40% showed abnormal cytological findings. In addition, 750 or 7.4% had atypical findings. Follow-up was handled by tumor clinics in the areas where screening was done.

EVALUATION METHODOLOGY: A count was taken of those who participated in the screening and who required the follow-up, among populations as a whole as well as by race and age.

PROJECT: Response to a Program of Screening for Cervical Cancer

CITATION: Naguib, Samir M., et al. Response to a Program of Screening for Cervical Cancer. PUBLIC HEALTH REPORTS, December, 1968, 83:12.

ANNOTATION: Reports on the use of a mass screening program for cervical cancer utilizing a cancer detection kit that is mailed to women. The program included a publicity campaign concentrated in a six-week period following the start of the survey.

SPONSOR: The American Cancer Society, Maryland Division and Johns Hopkins University School of Medicine.

HISTORY: Not known.

COVERAGE: LOCAL Washington County, Maryland

EMPHASIS: PREVENTION

MEDIUM: RADIO Spot Announcements
NEWSPAPER
MAGAZINE

AUDIENCE DIFFERENTIATION: White females, age 30-45 years.

DURATION: 6 months

PROGRAM OBJECTIVES: To get women to use a new device, the Davis cytopipette, which is essentially an irrigation smear method to detect cancer of the cervix.

COST: Not specified.

OUTCOMES: Seventy-five per cent of those contacted used and returned the device.

EVALUATION METHODOLOGY: Follow-up interviews were conducted on non-respondents although no control group was used. The authors clain a high association between publicity and participation but there is no data available in the report on this.

PROJECT: Motivation Technics (sic) in a Cancer Detection Program: Utilization of Community Resources

CITATION: Hulka, Barbara S. Motivation Technics in a Cancer Detection Program: Utilization of Community Resources. AMERICAN JOURNAL OF PUBLIC HEALTH, 1967, 57:2.

ANNOTATION: A discussion of methods which "have proved successful, and unsuccessful, in stimulating medically indigent women to accept one particular service - that of screening for cervical cancer."

SPONSOR: U. S. Public Health Service Cancer Control Program

HISTORY: Not known.

COVERAGE: LOCAL Allegheny County

EMPHASIS: SCREENING

MEDIUM: NEWSPAPER
MAGAZINE
OTHER PRINT Postcards, letters included with welfare checks, captive group referral (i.e., Planned Parenthood patients whose income is below certain level receive treatment free)

Health Fairs (Health-O-Rama)

Patient Referral Cards - this was a double post card with a perforated separation between the two halves. One section contained a few words stating what a Pap test is and why all women should get it. It also indicated that the examination and test were provided free of charge for women who could not afford to pay a private doctor. The other section could be torn off and used as an appointment request card, which was pre-stamped and addressed to the clinic.

AUDIENCE DIFFERENTIATION: Female

DURATION: 32 months

PROGRAM OBJECTIVES: To encourage medically indigent women in Allegheny County to make use of the available resources for screening for cervical cancer. This was a first-time objective.

COST: Not specified.

OUTCOMES: The problem of motivating women to accept a health service can be avoided by screening captive groups.

"A consistent pattern in the welfare offices, where appointments were made for the patients, was the high level of appointments made and the low level of appointments kept. When women request appointments themselves, 50% or more of the women actually keep the appointment.

The recruitment of patients in situations not related to health is not effective even though other circumstances such as availability of the target population, adequate time and space for discussion and well-trained interviewers may be favorable. Women are apparently unable to shift their focus of interest from whatever brought them to the particular location to the subject of cervical cancer.

Mailing is an efficient method of contacting many women. Although percentage of response is low, the actual number examined can be significant. The notification should include a simple mechanism whereby the woman can request the service. A telephone number alone is not sufficient since many medically indigent persons do not have immediate access to a telephone and it costs money to use it. A pre-stamped and addressed appointment request card on which the patient writes her name and address is useful."

The author claims that the use of mass media was not effective as a motivation technique. Less than two dozen referrals could be coded to this source.

EVALUATION METHODOLOGY: Three principle methods were used to reach women - referrals through captive groups, through other agencies and persons, and by project personnel. The captive groups included clinics of the Planned

Parenthood Association, Venereal Disease Clinics of the Allegheny County Health Department, and three institutions that requested screening for their residents - the C. Howard Marcy State Tuberculosis Hospital, the Allegheny County Workhouse, and the Lemington Home for the Aged. The second major group included persons receiving mailed notices with welfare checks, patients referred through Polio vaccination centers, persons referred by previous clinic patients, and patients referred by private physicians (names of doctors who treat welfare recipients were obtained through the Department of Public Assistance). The final category included persons reached through Health-O-Ramas held in low-income areas, contacts made with applicants seeking public assistance and applying for food stamps, through clinics set up in low-income public housing projects and through community organizations and programs.

PROJECT: Cancer Control Project - State of Montana

CITATION: Cancer Control Activities, Montana. National Cancer Institute. November 1973.

ANNOTATION: The Cancer Control Project included three different activities. The first of these, the Multiphasic Health Screening Clinics, took place in eight counties and included tests on general family history of cancer, personal history, weight loss, Pap smears, smoking habits, and anemia. The second activity, Workshops on Cancer Detection for Women, took place in four cities and included seminars to demonstrate breast self-examination and to emphasize the need for annual Pap smears. The final activity included physician-nurse educational seminars on cancer of the breast and cervix and physician education and screening clinics on head, neck and oral cancers.

SPONSOR: National Cancer Institute

HISTORY: This program is part of the Multiphasic Health Screening Activities, primarily for the elderly.

COVERAGE: LOCAL The Multiphasic Health Screening Clinics took place in Lake County, Jefferson County, Broadwater County, Ravalli County, Missoula County, Toole County, Madison County, and among Health Department employees.
Workshops on Cancer Detection for Women took place at Columbus, Helena, Forsyth and Malta.
Physician-nurse seminars took place at Billings, Great Falls, Butte, Missoula, Kalispell, Havre, Bozeman and Miles City.
Physician Education and Screening Clinics took place at Butte, Helena, Havre and Kalispell.

EMPHASIS: SCREENING

MEDIUM: WORKSHOPS
SEMINARS

AUDIENCE DIFFERENTIATION: A general audience was included in the Multiphasic Health Screening Clinics, and women took part in workshops on cancer detection.

DURATION: The Multiphasic Clinics lasted two to four days and took place between December, 1972 and October, 1973.
The one-day workshops were held in March, May, August and October, 1973.
Physician-Nurse Educational Seminars were held one day in each city during May and November, 1973.
Physician Education and Screening Clinics were held two days during December, 1972 and January, April and June, 1973.

PROGRAM OBJECTIVES: These are not stated in the material currently on file.

COST: They are currently unable to separate out specific costs for the different aspects of this program.

OUTCOMES: 2561 people attended the Multiphasic Screening Clinics in 1973, 200 women attended the Workshops and 1001 people attended the Screening Clinics on head, neck and oral cancers.

EVALUATION METHODOLOGY: No evaluation has been done.

PROJECT: Pap Test Clinic and Education Demonstration in the Inner City

CITATION: PAP TEST CLINIC AND EDUCATION DEMONSTRATION IN THE INNER CITY. Spartanburg County Unit, ACS, South Carolina Division.

ANNOTATION: This project combined education activities with a Pap test clinic and was aimed principally at the inner-city population of Spartanburg, South Carolina. The project was implemented with the help of the Model Cities staff and was directed primarily at the 17,000 residents of the Model Cities program. The clinic, however, was open to all residents of Spartanburg and an effort was made to attract persons from outlying areas into the clinic.

SPONSOR: Spartanburg County Unit of the American Cancer Society, South Carolina Division.

HISTORY: Spartanburg South Carolina's Public Education Committee wanted to contact hard-to-reach special population groups. "In Spartanburg, the Office met to consider how best to approach and utilize such an opportunity. A meeting with the model cities staff would be set up, they decided, and a program of intense block-by-block cancer education proposed. In order to provide a tangible motivation for such an education program the concept of an education-demonstration Pap Clinic was approved by the unit board."

COVERAGE: LOCAL Spartanburg, South Carolina

EMPHASIS: GENERAL EDUCATION
SCREENING

MEDIUM:

INTERPERSONAL	Every home in the Model Cities area was contacted personally by a citizen participation specialist of the OEO. ACS volunteers contacted a number of homes outside this area.
TELEVISION	WSPA-TV, news stories, interviews, public service announcements.
RADIO	WSPA, WKDY, WORD, WASC, public service announcements, announcements by the Mayor of Spartanburg, news stories

NEWSPAPER — Spartanburg Model Cities newspaper, announcements of free clinic location and times.

PAMPHLETS

POSTERS

AUDIENCE DIFFERENTIATION: The female participants were 16-85 years in age and half were black and half white.

DURATION: The clinic was held one day, May 4, from 3:30 p.m. to 10:00 p.m. Preparation for the clinic and the general education activities took place from January-May, 1972.

PROGRAM OBJECTIVES: To provide a Pap test to all women desiring one in Spartanburg - focusing primarily on inner-city women. Also to provide general cancer education to residents of Spartanburg, especially the hard-to-reach, special population groups.

COST: $250 was spent primarily for disposable materials and handbills. There were no costs relating to cytology for smears, other than the cost of slides and forms. A total of about 35 hours of staff time was involved. Volunteer time totaled about 1000 hours. The clinic involved some 35-40 people, each of whom worked about 6 hours.

OUTCOMES: 427 women were examined at the clinic; 156 (36.5%) came from the Model Cities area; 271 came from outlying areas; 8 doctors and 15 nurses volunteered their time to conduct the clinic; 213 women had never had the test before. Free transportation was provided and 100 people were transported to and from the clinic. Every house in the Model Cities area was contacted personally. However, there is no data available to indicate how effective the educational aspect of the program was.

EVALUATION METHODOLOGY: The Model Cities area is supposed to contain 17,000 persons, and although the number of women is not specified, the 156 women from the area that attended the clinic could not have been a very large proportion of the total female population in the area. The ACS did involve and use the Model Cities' staff. Because there is no control group, there is no way of knowing how effective this approach was. Similarly, there is no way to determine what effect the publicity campaign had in motivating people to attend the clinic.

PROJECT: Operation Cancer Control (OCC)

CITATION: Operation Cancer Control. Florence County Unit, ACS, South Carolina, Division, Inc. 1972.

ANNOTATION: Operation Cancer Control was a saturation campaign, sponsored by the Florence County, South Carolina Unit of the American Cancer Society, designed to provide public education on cancer with "maximum impact and coverage over a concentrated period of time." The program utilized mass distribution of materials by volunteers, extensive media coverage, and included a multi-phasic screening clinic.

SPONSOR: Florence County, South Carolina Unit of the American Cancer Society

HISTORY: Operation Cancer Control grew out of the first meeting of the new year between the new Public Health Education Chairman and her local Area Director. In talking about who would head up the various sub-chairman positions for employee education, clubs and organizations, schools and colleges, special population groups, and youth organizations, the idea was conceived of a team effort which would lead up to, climax in, and continue to grow from a special demonstration week.

Each of the subchairmen was recruited and coordination with the Public Information committee was planned. The local board given information on the project for their approval and ideas.

Planning, recruitment, orientation, and contacts took place from the summer of 1971 through the actual week of the project. Each subcommittee worked closely with the overall chairman yet also worked independently to accomplish their share of the project's goals.

COVERAGE: LOCAL Florence County, South Carolina

EMPHASIS: GENERAL EDUCATION
DIAGNOSIS

MEDIUM:	FILM	"Time and Two Women", "B.S.E.", "Life Story" - free showings at three theatres
	PAMPHLETS	
	NEWSPAPERS	Features, articles, ads, personals
	TELEVISION	Panels, cablevision (continuous camera on warning signals and other promotion, Dial a Number)
	RADIO	Spots, interviews
	OTHER	Marquees (restaurants, motels, businesses) Church bulletins Cancer poster contests in all schools Announcements in newsletters in schools Billboards

AUDIENCE DIFFERENTIATION: General Audience

DURATION: March 6-14, 1972

PROGRAM OBJECTIVES: To reach every person in the county with cancer information and to encourage everyone to attend the multi-phasic screening clinic.

COST: 200 individuals participated. Over 1,000 man-hours went into the project.

OUTCOMES: 28,848 persons were reached in film/speaker programs. Of these, 15,055 were employees and 5,037 were in special population groups,

particularly black low-income and white agricultural low-income groups. The clinic screened 135 persons. 97 received proctos.

EVALUATION METHODOLOGY: There is no way to tell how effective the campaign was in increasing individual knowledge of cancer or in changing behavior. There was a strong effort to reach employees in business and industry by encouraging employers to allow time off for their employees to attend the clinic, view films and attend discussion groups.

PROJECT: Development of Pap Smear and Breast Self-Examination Program

CITATION: "Pap Smear and Breast Self-Exam". Nassau-Suffolk Regional Medical Program. 1971.

ANNOTATION: This project was designed to recruit, train, introduce and demonstrate the usefulness of paraprofessional health workers and to provide mechanisms for earlier detection and treatment of uterine and breast cancer. The project began operation in Wyandanch, Long Island, a community with a high concentration of non-white and low-income residents.

SPONSOR: Nassau-Suffolk Regional Medical Program

HISTORY: "Six per cent of all women face the risk of breast cancer and, in 90% of all cases, the abnormality is first noted by the patient. While 4% of all women face the risk of uterine cancer, the incidence of uterine cancer for non-white women is 60% higher, the death rate 12 per cent.

Attempts to address these problems are constantly hampered by a major related problem -- low-income, ethnically homogeneous communities have significantly fewer practicing health professionals than their more affluent neighboring communities.

In an area such a Wyandanch, Long Island, with a high concentration of non-white low-income residents, the physician to patient ratio is 0.77 per thousand persons as compared to 1.44 per thousand in Huntington Town, 15 miles to the north. The problem of scarcity of local physicians is further compounded by their reluctance to provide routine medical care to Medicaid patients due to low reimbursement rates for physician office visits.

In July of 1971, Good Samaritan Hospital was awarded a federal grant by the N-S RMP to institute a new approach to this complex problem. The purposes of this project are to recruit, train, introduce and demonstrate the usefulness of paraprofessional health workers and to provide mechanisms for earlier detection and treatment of uterine and breast cancer. The project started operation at the Martin Luther King, Jr. Community Health Center in Wyandanch."

COVERAGE: LOCAL Wyandanch, Long Island

EMPHASIS: DIAGNOSIS

MEDIUM: INTERPERSONAL Audiovisual aids are currently being developed for use in the teaching of staff and patients.

AUDIENCE DIFFERENTIATION: Female

DURATION: The program began in July, 1971 and is currently in operation.

PROGRAM OBJECTIVES: "To decrease death from uterine and breast cancer by providing community detection and treatment services.

To alleviate scarcity of physicians by training others to perform pap smear and self breast examinations.

To increase community awareness of preventive health care.

To assure entry into the health industry for the disadvantaged by training community health aides in examination techniques."

COST: Not specified

OUTCOMES: Six paraprofessionals were trained and five of them completed a one-year term at the Center performing project activites. All of these individuals entered the health industry.

As of the end of June, 1973, 75% of adult women had been contacted during field contacts. In these contacts, emphasis was placed on making the community aware of the need for preventive check-ups.

As of the end of June, 1973, about 2300 Pap smears and breast examinations had been performed since the project was first funded in 1971.

EVALUATION METHODOLOGY: None.

PROGRAMS EMPHASIZING REHABILITATION

PROJECT: Cancer Call-Pac

CITATION: "A History and One-Year Evaluation of Cancer Call-Pac". Prepared by ACS, Illinois Division, Inc.

ANNOTATION: Conceived and founded by Mrs. Georgia Photopulos, a four year cancer patient from Chicago, Illinois, Cancer Call-Pac offers a unique listening service for cancer patients and their families. When a cancer patient places a call to Call-Pac (available 24 hours a day) s/he is immediately put in touch with with one of the listening volunteers who is able to answer her/his questions, usually someone with a similar form of the disease. Primarily, the volunteers offer emotional support; they do not give medical advice or attempt to intervene between the patient and doctor. If the caller is experiencing extreme grief of is afraid of dying, the listener can refer her/him to a pastoral counseling service whose members come from many denominations. "I have discovered that fear is the biggest enemy," said Mrs. Photopulos. "Fearing cancer is harder than having it. Fear is what makes you delay in seeking treatment. Fear is what cripples your ability to deal with it and fear, ultimately, can be fatal."

SPONSOR: American Cancer Society, Chicago Unit

HISTORY: Early in 1972, Mrs. Photopulos presented her idea for a listening service to volunteers and staff of the Chicago Division of ACS. They were convinced that such a program would be worthwhile. A pilot grant was obtained and a committee of volunteers from medicine and communications was formed. Training sessions for listeners were held and letters sent to medical personnel all over the city. In December of 1973, the program was redesigned with more of the responsibility distributed to other volunteers to ease Mrs. Photopulos' work load. As of July 1974, the ACS service committee voted to continue its support of the program.

COVERAGE: LOCAL - Chicago Metropolitan Area

EMPHASIS: GENERAL EDUCATION
REHABILITATION

MEDIUM: TELEPHONE A 24 hour listening service is provided.

AUDIENCE DIFFERENTIATION: General population--usually cancer patients and/or their families.

DURATION: One year active program, one year in preparation.

PROGRAM OBJECTIVES: To provide a "sympathetic ear" listening service for both cancer patients and their families and to determine whether it is feasible for an ACS unit to offer such a service.

COST: An initial grant of $3600 got the program off the ground, $600 for ongoing expenses and $600 per year for the Annex Answering Service provided to the program by a widower of a cancer patient.

OUTCOMES: The program has been highly successful. The total number of persons reached through the answering service was 1006, computed over a 13 month period. This figure reflects initial contact with the service and not total contacts. Most listeners report making at least one or more follow-up calls to provide continuing support.

EVALUATION METHODOLOGY: A count and analysis of the calls taken by the volunteers was made. Subjective evaluation of the service by volunteers, callers, and staff was for the most part positive.

CHAPTER VI: POTENTIAL OF COMMUNICATION TECHNOLOGY AND "SOCIAL COMMUNICATION ENGINEERING" FOR CANCER CONTROL

A GLIMPSE INTO THE FUTURE

The future of cancer public communication programs may be significantly altered both in the mechanics and the outcomes by technology. Two such innovations are cable television and satellites. Bagdikian (1971) tells us that since cable is a multi-channeled wire that carries messages into the home, it has the potential of delivering particular messages to particular groups of homes. When this capacity is combined with cable's capability to precisely measure the size, characteristic, and location of the audience, we can see the possibility for systematically testing information programs and using the most effective message for a particular audience. A second contributing factor in technological advances will be the availability of satellites for broadcasting long-distance transmissions directly to individual homes in sparsely populated and previously inaccessible areas. This will give more sponsors of public communication programs the ability to reach people in remote areas.

The future impact of cable television has been discussed by several researchers. For instance, Parker and Dunn write:

> "Many of the new cable television systems now being installed have sufficient channels to enable subscribers to communicate back to a computer at the head-end of the cable system. Such systems, referred to as subscriber-response systems (SRS), now permit a single computer to collect information from as many as 10,000 subscribers in less than 2 seconds. These same systems can automatically record whether the television set is on and what channel it is tuned to. ...
>
> "Cable television may turn out to be the most economical way to provide some kinds of digital communications to homes, such as computer-aided instruction, information retrieval, and time-shared computer services."

Borrowing the idea, but not the specific example from Goldmark, we can imagine the following situation. A woman switches to the health channel. She sees a demonstration of breast-self-examination. She has never tried the procedure and is unsure of herself. She uses the link to the computer and asks for some additional material to be sent to her.

Later that week she recieves the material and decides to try BSE. Wanting the visual model, she uses the terminal to recall the videotape on BSE. While viewing the tape she tries the procedure. She discovers a lump, or at least an irregularity. She does not know what to do since she is fairly new in the town and does not have a regular physician. She queries the terminal for the location of clinics and screening centers where she can be checked. The list provides her with addresses and phone numbers. She phones a nearby center and quickly has an appointment.

Such usage of cable television and computer terminals is somewhat visionary. However, today's technology makes it possible. In describing recent developments in cable television Goldmark says:

> "With the limited two-way feature added to a cable system that is also linked to a centrally located digital computer, a system could do any or all of the following things: 1) enable the subscriber to select any one of 12 or more television channels, including local and distant broadcast signals, locally originated nonbroadcast programs and perhaps cable programs distributed nationally by way of domestic satellites; 2) provide channels for groups with specific communicative needs, such as physicians and public officials; 3) enable subscribers to order products; 4) enable viewers to take part in public-opinion polls, with the responder's identity concealed if that is desirable; 5) provide warning at an appropriate responding point of fire or burglary in the home or of a medical emergency in the family; 6) offer educational channels with an option for response by the student; 7) provide statistical data on the opinions of viewers about the television programs being offered; 8) offer a service whereby lights, heat, warning systems and other devices would be turned on or off in a home according to the owner's instructions; 9) read light, gas, and water meters, send the reading to the utility's company computer and return the bill to the user; 10) provide copies of printed material in the subscriber's home; 11) offer a 'frame-grabber' facility whereby the subscriber could obtain and store for continuous display single pictures from a television program or a slide presentation; 12) provide channels for programs offered by individuals or groups, and 13) offer access to premium programming with better color and resolution than the commercial standard.
>
> "This list does not exhaust the possibilities; indeed, they are limited only by imagination and the stricture of the marketplace."

There are several new legal developments that affect the future potential of cable television for public communication programs. These changes are described by Parker:

> 'The tempo of change has picked up as a result of the new FCC cable television rules that went into effect at the end

of March 1972. Distant television signals can now be imported into the top 100 television markets, although copyright rules will make that option less attractive in the top 50 markets than in the second 50 (Federal Communications Commission, 1972). The new cable ruling requires a minimum of twenty channels, with channels reserved for free public access, education, and government services. It also requires program origination by cable operators and the provision of channels available for lease by others. The new ruling requires two-way communication capability (at least permitting digital response from subscribers) in new construction and requires that capacity be expanded when the available channels are becoming full."

Cable television is only one technology that may affect the future of cancer public communication programs. A second important development is satellites. Morgan and Singh tell us:

"Communications satellites are one of the communication technologies which are capable of transmitting and distributing electronic information (radio, telvision, digital computer data) for use in education. Because of the ability of satellites to deliver signals over wide areas with potentially attractive costs in the 1970's, considerable interest has been shown in using satellite technology to enhance educational programs, both in the United States and in other countries.

"The satellite is a part of an educational telecommunications system which receives signals from the ground and disseminates the signals over designated areas. The educational media which could be transmitted via satellite include public and instructional television and radio, and still-picture television and facsimile, and digital data for use in computer-aided or managed instruction, as well as remote computing for instructional, research, or administrative purposes. Many of these media are likely to be part of experimental satellite transmission in the 1970's.

"In the United States, communications satellites are likely to represent one segment of an educational telecommunications mix. There is a great deal of interest now in utilizing cable systems for educational television in urban areas. The Instructional Fixed Television Service, microwave, telephone, and UHF and VHF broadcast systems provide a variety of such services."

There are a range of new technologies that are recently in use or that are ready for use. These "new media" include, according to Rossi and Biddle, the conventional programmed instruction devices, motion

pictures, sound recorders, and the newer communication technologies. The authors remind us that the new media have three primary functions. These include 1) the transmission and dissemination of information, 2) the socialization or transmission of a cultural system and 3) the mobilization or persuasion of beliefs that are necessary for action.

Few public communication programs have effectively utilized the functions of the media. Often the problem exists because there is a lack of planning. Future programs will need to find ways to make effective use of the social science knowledge base and the new technologies. The planning and execution of such programs might rely on social communication engineers.

COMMUNICATION RESEARCH AND SOCIAL COMMUNICATION ENGINEERING

Despite the obvious need for improvement in the availability and accessibility of cancer control services, it is true that public knowledge and utilization of such services lag considerably behind changes in their actual availability and accessibility. At a time when particularly rapid change is expected in the provision of services, important questions of public knowledge and utilization need to be addressed, both through research and through action programs.

Public knowledge is an integral aspect of the utilization problem. Studies of health services utilization (e.g., Eichhorn and Aday, 1972) routinely show a correlation between knowledge and utilization. Of course, no simple causal relationship should be argued -- utilization can lead to knowledge as well as vice versa.

Health knowledge is unequally distributed in society. A study conducted by Schramm (1967) showed that the health knowledge "haves" are young, white, and better educated, while the "have nots" are old, nonwhite, and less educated. Utilization studies (for example, Andersen et al., "Health Service Use: National Trends and Variations," 1972) show that the better- educated health knowledge "haves" in fact require little health care and readily receive the little that they require. Health knowledge "have nots" require extensive health care and do not receive it.

Knowledge and utilization are variables of special concern to the social communication engineer who focuses on the communication processes by which individuals, groups, and societies co-orient themselves and achieve goals. Knowledge and utilization also concern the engineer in her or his plans to reach the public with information and persuasion campaigns to raise knowledge levels and increase utilization of social services and benefits.

Rees and Paisley discussed the concept of the social communication engineer in their 1968 article "Some Predictors of Adult Information Seeking and Media Use." They wrote:

"Our growing knowledge of the operation of communication

systems, including information seeking and media use behavior, leads to communication strategies fitted to needs and dispositions of the target audience.

"This adaptive approach, based on message/channel/audience analysis, committed to objectives rather than institutions, might be called 'social communication engineering.' ... its success depends upon the best application of new knowledge in the development of innovative strategy."

The social communication engineer envisioned by Rees and Paisley is concerned with an interweaving cycle of research and action steps. Cyclically, the engineer needs answers to these six questions:

1. What is the current status of the problem (e.g., public delay in seeking cancer screening, diagnosis, or treatment)?

2. Drawing upon appropriate theories of communication behavior and health behavior, how can the problem be explicated into compensatable and uncompensatable aspects?

3. Given financial resources, medical backup, ethical and legal constraints, etc., what is the range of alternative strategies that may deal effectively with the problem?

4. How can the most reasonable of these strategies be tested for effectiveness?

5. How can the strategy that "passes" be refined and extended to reach maximum effectiveness?

6. How can the short-term and long-term outcomes of the strategy be evaluated?

The social communication engineer answers the first question with system-status research. This phase provides data on problem-associated behaviors as well as on public knowledge, attitudes, contextual variables, etc.

The engineer answers the second question with problem-definition research. The second phase focuses precisely on interrelationships among problem-associated behaviors and their probable antecedents. The engineer looks for enough evidence of a theoretically reasonable pattern to "get on with" an exploration of intervention points and related strategies.

The third question leads to strategy-formation research. This phase is marked by the systematic nomination and review of alternative strategies. The emphasis changes from WHAT IS THE PROBLEM? (#1) and

WHAT CAUSES THE PROBLEM? (#2) to WHAT CAN BE DONE ABOUT THE PROBLEM?

To answer the fourth question, the engineer designs an environment (laboratory or field setting) in which alternative strategies can be tested, with restrictions as necessary on the time period during which the alternatives are allowed to run and the size of population samples involved with each alternative. Carrying a single alternative into this phase -- a common aspect of "non-engineered" programs -- leaves only the binary possibilities of success or failure. Carrying multiple alternatives into this phase, even at the expense of the thoroughness with which each is tested, leaves the engineer with a range of choices for each criterion that the program is intended to meet. Multiple testing also allows for the serendipitous finding that two or more alternatives are equally successful but with different groups or in different contexts.

The fifth question leads to more precise study of the "winning" strategy, so that it can be refined -- "tuned" or "calibrated" -- and extended in its application. Greater effect for lesser cost is the criterion of this phase.

The sixth question is by far the most difficult and controversial. An extensive research literature exists on "first-order effects," "second-order effects," "unanticipated effects," "spurious criteria of causality," etc. It may take years of program operation before certain questions of effect can be answered reliably and validly.

In the meantime, evolution of the policymaker's and engineer's view of the original problem is likely to refocus attention on the first question and launch a new cycle of research and action.

Much of the sequence just described is hypothetical in the sense that social communication engineers scarcely exist and are generally not allowed to develop entire public communication programs from research-derived principles (at the expense of policymakers' hunches). However, no sequence of research and action steps less systematic than this can be justified on the basis of:

-- our growing knowledge of effective communication strategies;

-- federal and other resources being committed to programs, such as cancer control, in which success ultimately depends on public knowledge and utilization;

-- the potential of advanced technologies.

APPENDIX A: CANCER PUBLIC EDUCATION PROGRAMS OF THE PAST DECADE EXHIBIT VARIETY IN CANCER SITES, TARGET AUDIENCES, COMMUNICATION STRATEGIES AND PROGRAM OBJECTIVES.

PREVENTION

Program Name	Sponsor	Origin/Site	Media Used
Project HEALTH	G.D. Searle	Skokie, IL	AV: film PR: monographs IP: discussion groups
Smoke-Choke-Croak	American Cancer Society	Ft. Lauderdale, FL	AV: film (videotape)
Youth Patient Panel Patient Panel	American Cancer Society	Los Angeles, CA	PR: posters, brochures, school newspaper articles IP: panel
San Diego Smoking Research	Nat'l Clearing-house on Smoking and Health	San Diego, CA	AV: films, slides, tapes (TEL-MED) via telephone PR: pamphlets, work-books, catalog of resources IP: peer counseling
Wisconsin Clinical Cancer Center	National Cancer Institute	Madison, WI	AV: radio, tv psa spots PR: brochures, newspaper articles IP: telephone counseling

Philadelphia Employee Education	American Cancer Society	Philadelphia, PA	AV: ACS films PR: ACS brochures IP: discussion groups
Feeling Good	Children's Television Workshop	New York	AV: television PR: newspapers and magazines for publicity
Why You Smoke	American Cancer Society	New York	AV: television PR: newspapers for publicity
Sioux Indian Cancer Control	American Cancer Society	South Dakota	AV: ACS films for Community Health Representatives (CHR) PR: ACS brochures IP: visits by CHR to homes
CAN-DIAL	Roswell Park Memorial Institute and NCI	New York	AV: tapes via telephone PR: brochures
Speakers Bureau	Roswell Park Memorial Institute	New York	IP: speakers
Smoking Education	American Cancer Society	California	AV: film (videotapes shown on UHF) PR: booklets IP: discussion groups
Leave It To Laurie	American Cancer Society	Washington	PR: play text IP: drama presentation

Elementary School Curriculum Project	Nat'l Clearing-house on Smoking and Health	California	PR: classroom materials IP: teacher training
The Big "C"	American Cancer Society	Philadelphia, PA	AV: telethon using ACS films, guest stars
Poster Contest on Health Hazards of Smoking	American Cancer Society	Minnesota	AV: radio and tv used for publicity PR: newspapers for publicity, posters
Sack Lunch Employee Education	American Cancer Society	Iowa	AV: ACS films PR: ACS brochures IP: discussion groups
Breast Cancer: Where We Are	American Cancer Society	New York	AV: television PR: newspaper, magazines for publicity
Medical Students Teach the Community "Lifeguard Program"	Univ. of Southern California, School of Medicine	Los Angeles, CA	AV: ACS films, slides PR: ACS brochures IP: medical students talk with life-guards
Speakers Bureau	Mountain States Tumor Institute and NCI	Idaho	IP: speakers

Cancer Prevention (Pap and BSE)	Public Health Service, Indian Health Service	Arizona and New Mexico	IP: community health representatives receive training before visiting Indian homes
Study of the Effectiveness of Alternative Mass Distribution Leaflets	American Cancer Society	CO, PA, MD, VA, OH, CA	PR: Leaflets in 4 versions IP: Volunteer gives leaflets; phone follow up of effectiveness
Study of the ACS Employee Education Program	American Cancer Society	Quaker Oats (IL) Central Wire & Steel (IL), Barnett Manufacturing Co. (FL)	AV: ACS films PR: payroll stuffers, newspaper articles, pamphlets, posters
Study of a Six-Month ACS Employee Education Program	American Cancer Society	Container Corp. of America (IN)	AV: ACS films PR: literature distribution, payroll stuffers, newspaper articles, pamphlets, posters, exhibits IP: medical speakers
SCREENING/DETECTION			
Experimental Cytology	Public Health Service, Div. of Community Health Services	Ohio	PR: statement read by worker IP: community worker

Health Insurance Plan of Greater NY - Screening	Health Insurance Plan of Greater New York	Greater New York	PR: letter IP: telephone
Operation Cancer Control	American Cancer Society	South Carolina	AV: ACS films radio, tv for publicity PR: newspapers, church bulletins, poster contest for publicity and info/educ. IP: multiphasic screening
Cancer Control	Dept of Health and Envionmental Sciences - NCI	Montana	IP: workshops, seminars
Pap Test Clinic and Education Demonstration	American Cancer Society	Spartansburg, NC	AV: radio and tv for psa stories and interviews for publicity PR: newspapers announce free clinic locations and times IP: OEO representatives in Model Cities area
Motivation Techniques in Cancer Detection	Public Health Service, Div. of Chronic Diseases	Pennsylvania	AV: radio and tv for publicity PR: postcards with info and appointment times newspapers and posters for publicity IP: through agencies and health fair

CANSCREEN	Preventive Medicine Institute of NY and Fox Chase Center for Cancer and Medicine Science in Philadelphia	Philadelphia	PR: letter of invitation health history questionnaire IP: counseling and screening
Cancer Education for for Inner City Residents	American Cancer Society	Philadelphia	AV: ACS films for group leaders PR: ACS brochures IP: discussion groups
Have-a-Check	American Cancer Society	Maryland	AV: films and exhibits for publicity PR: brochures and posters for publicity IP: volunteer gives facsimile check
Community Cancer Demonstration Project	Public Health Service, Div. of Chronic Diseases	Florida	PR: letters IP: group meetings and opinion leaders
Multiphasic Health Screening Clinic	Dept. of Health & Environmental Sciences and NCI	Montana	IP: group meetings
Workshops on Cancer Detection for Women	Dept. of Health & Environmental Sciences and NCI	Montana	IP: group meetings

REHABILITATION

Management of Intestinal Stomas	Regional Medical Program	Maryland	AV: films, slide-tapes PR: manuals
Reach for Recovery	American Cancer Society	National	PR: brochures IP: former mastectomy patients visit women just after operation
Ostomy Rehabilitation and Counseling	American Cancer Society	Georgia	IP: former colostomy patients visit new patients

KEY: AV = Audiovisual (film and electronic media)

PR = Print

IP = Interpersonal

SOURCE: Ongoing project for the National Cancer Institute, *Review and Evaluation of Methods of Public Education in Cancer* (M. Butler-Paisley and W. Paisley-Butler, NO1-CN-45041).

APPENDIX B: STUDY METHODS AND PROCEDURES

IDENTIFY CANCER PUBLIC COMMUNICATION PROGRAMS

The initial phase of this study was the identification of cancer public communication programs. Putting aside prior decisions on appropriate criteria for inclusion, we focused on programs that had the potential of offering guidance for others designing new programs and that were documented. One way to encompass as many types of programs as possible was to seek out programs from the following domains:

SPONSORSHIP -- public, private

COVERAGE -- national, regional, local

EMPHASIS -- general education, prevention, screening/detection, rehabilitation

MEDIUM -- print, interpersonal, audio-visual

AUDIENCE DIFFERENTIATION -- sex, age

CANCER SITES -- breast, uterus, lung, colon/rectum, skin

We used a variety of strategies for locating public communication programs. We worked closely with the American Cancer Society, New York. There we were able to read brief documentation of the programs that had been selected for an Honor Citation. We reviewed all such programs from 1960 to 1974. From these we chose 15 to investigate.

Second, we wrote to all state departments of public health to determine what types of cancer education programs they sponsor. Although we did learn of a few efforts, we found that in general the state departments of public health do not initiate their own programs in this area.

Third, we talked with the National Cancer Institute and the National Clearinghouse on Smoking and Health, the two governmental agencies that support public cancer communication programs. We were able to pinpoint several interesting programs sponsored by these two sources. In addition, their staffs were able to tell us of some other programs.

Fourth, we searched for programs in the medical and public health journals. We conducted a MEDLINE (on-line computer access to the National Library of Medicine's MEDLARS bibliographic system) search that alerted us to several additional programs that would have escaped our notice otherwise.

Fifth, we send notices and letters to each of the schools of public health, announcing our project and asking for the names of a contact

people involved in cancer education programs or research. Although there was a lot of interest in our project, not many names were suggested.

Sixth, we sent letters to health-related organizations, associations, societies, and businesses. This extensive list included the Association of Medical Colleges, National Cancer Cytology Center, Public Health Cancer Association of America, American Medical Association, Blue Cross/Blue Shield, Health Maintenance Organizations, etc. We uncovered a few leads using this procedure.

And seventh, we used the interpersonal network to uncover other programs. Each person contacted about a program was asked to name other efforts. Those working in cancer public education are often aware of current programs being undertaken by their colleagues. These contacts were useful.

Our initial efforts to locate programs were directed at the United States. We began reading the literature of programs from other countries to help give us a perspective on the programs we were studying. We soon saw that the United States was quite different from certain other countries. This difference was best highlighted in a comparison of American and English programs. English efforts in cancer public education began later than ours, relied more on surveys of knowledge and attitudes, and continue to monitor the public as a way of testing the effectiveness of programs. Even small efforts rely on research more than intuition. Many US programs seem to rely on intuition rather than research. This difference seemed useful to discuss in this project. Conversations with NCI staff lead us to an extension of our original charge. To locate several programs in England, we relied on the literature and contacts with people in England. We chose three programs to fully document.

DOCUMENT PUBLIC CANCER COMMUNICATION PROGRAMS

Each program to be included in our final report was fully documented. We requested information from the program directors. We received project descriptions and some materials used in the program. From this information we extracted the following points:

NAME OF PROJECT

CITATION

ANNOTATION

SPONSOR

HISTORY

COVERAGE

EMPHASIS

MEDIUM

AUDIENCE DIFFERENTIATION

DURATION

PROGRAM OBJECTIVES

COST

OUTCOMES

EVALUATION METHODOLOGY

EXTRANEOUS/CONTEXTUAL VARIABLES

With some programs, we were unable to record information for each of the topic areas. Where possible, we wrote project directors for the needed information. All programs in Chapter V are presented using these categories. "Evaluation methodology" and consequently "extraneous/contextual variables" are often the least well documented. Chapter I presents some points related to the evaluation of public communication programs.

Originally, we had hoped to also provide the National Cancer Institute with a cost/benefit analysis of each of the chosen cancer public communication programs. The early optimism soon became inappropriate for two reasons. First, we had to arrive at a satisfactory definition of cost/benefit. Second, we had be able to utilize available data.

We considered solving the first problem by taking cost/benefit analysis at its most simplistic level. We would report on the actual costs associated with a program and the actual benefits (such as number of people reached). The problems associated with this type of analysis are discussed by Walsh and Williams. They point out these questions:

> "What kinds of extenal benefits or costs are to be included and which excluded if double-counting is to be avoided? ... Should undesirable attributes of projects be considered as 'costs' or 'negative benefits'? ... How can benefits or costs be valued which do not have market prices? How can political and social judgements be incorporated into the valuation process? ... Should higher discount rates be used for risker projects?"

In enumerating possible answers to these questions, the authors say:

> "What are the social costs and social benefits attributable to the project? The emphasis on 'social' costs and benefits is intended to make it clear that all costs and all benefits, no matter who is better off or who is worse off within the community, must be taken into account....

These comments reflect on the intent of cost/benefit analysis. They alert us to the need to consider the "social" consequences of a cancer public communication program, rather than the narrow sphere of finances. For instance, if a screening program in a factory caught five cancers in the early, treatable phase, there are social costs and benefits that apply to all employed in the company and to their families. Time taken off from work might be a cost since employees not only lose actual working time, but are distracted by the event and may lose additional time once they are back 'at work.' The discovery of several treatable cancers may cause others in the company to seek medical help more quickly if they notice unusual signs that may be sympsoms of cancer. Or they might encourage their families to have cancer check-ups. This increased awareness is a social benefit. Training a new individual to fill the place of someone who dies from cancer is probably a measurable cost. But what of the cost to fit the new person into the work arrangements, to fit in the new personality, etc.? Even if we were able to list all the possible costs and benefits for a particular program, Walsh and Williams remind us:

> "The enumeration of the costs and benefits that are to be measured is but the first stage in the analysis. The actual process of measurement will require two further conceptual steps: the quantification of the inputs and outputs, and their valuation. ...
>
> A useful analytical concept in this context is the 'shadow price', which is the price which reflects at the margin the social value of the good or service. It is treated as a management' price, or as a 'planning' price; it may or may not be the actual amount to be paid for the goods or services to which it refers. For instance, where a project will use labor which would otherwise have been unemployed, the 'shadow price' of labour might be regarded as zero, even though market rates of wages are paid, since it cost society nothing (in terms of other goods and services foregone) to have the labour used. ...

This point is a particularly difficult one for cancer public communication programs in the US since many of them are conducted by the American Cancer Society. The ACS relies on help from volunteers. Physicians and other health professionals who contribute their time are often 'losing' part of their professional salaries. Many women

contribute their time and although many are not otherwise employed, we need to consider the social cost of not having them employed. Occasionally, individuals are paid to participate in the cancer programs. For instance, women were paid $100 to become leaders in the ACS Philadelphia CANCER EDUCATION FOR INNER CITY RESIDENTS program. Is that a cost or a benefit according to the "shadow price" concept? Assuming we could list all the consequences of a program and that we could decide which were costs and which were benefits, Walsh and Williams reminds us of the problem of attributing a value to each of the costs and benefits:

> The value of health benefits is sometimes estimated in terms of the avoidance of loss of earnings through ill-health, although this obviously ignores the intrinsic worth of good health to the individual. ...

The question of how to value certain benefits and costs is often side stepped by social scientists who tend to measure what can easily be measured and valued and to ignore considerations that are difficult to quantify and value.

All of these comments are specific to our first concern about what is appropriately meant by cost/benefit analysis. Even if we had been able to arrive at a satisfactory solution to the subproblems of what are the social costs and the social benefits and how are they measured and valued, we still had to face our second problem. We had to use available data from each of the programs. We knew we could do additional analysis on existing information, but we could not collect fresh data on programs that were well underway or already concluded. Our final solution was to document known monetary costs and known outcomes, but not to try to link the two in a cost/benefit ratio. The time may come when cancer public communication programs are evaluated on the basis of their cost effectiveness. However, there will have to be much research on measurement of outcomes before this is possible. Once the thorny issues of cost/benefit analysis are better understood, there will still be the need to incorporate this knowledge into the early planning phase of a program. Otherwise, the necessary data will not exist at the conclusion of the program.

CHOICE OF PROGRAMS TO SITE VISIT

With many programs now documented in our files, we were ready to select fifteen that would be site visited. Our criteria were necessarily diverse. Some programs, although excellent, were no longer in operation and no staff existed to tell us additional information. Some programs seemed to have already been tried in several locations and did not provide provacative examples. Some programs were unique and easily belonged in our set of case studies. Some programs were genuinely similar and only one could

be included. Those in the last category were the most difficult. We asked for guidance from NCI as well as considered the benefits to be gained from site visits to each. All programs in this category appear in either Chapter IV or Chapter V.

The set of 15 programs chosen deal with five cancer sites (breast, uterus, lung, colon/rectum, and general), illustrate two change goals (knowledge/attitudes and behavior), are targeted to six audiences (women, men, special populations, employees, youth, and general), convey four educational contents (prevention, screening/detection, rehabilitation, and general), and utilize three communication modes (audio-visual, print, and interpersonal). Thus the chosen programs cover twenty facets of these five major factors.

CONDUCT SITE VISITS

During the summer of 1974, the project staff site visited the 15 chosen programs. The site visit agenda covered the following points:

1. Description of program (substance, target audience, desired change, materials used, etc.)

2. General philosophy of public communication programs (development of program ideas, details of history/development of program, etc.)

3. Local effectiveness of program (decision on who-to-reach, description of recruitment, number of people reached, description of program outcomes, etc.)

4. Program costs (staff time, materials, etc.)

5. Program exportability (additional target audiences, additional cancer sites, other cities, states, etc.)

WRITE FINAL REPORT

The last phase of the project involved reducing the large volume of information gathered from various sources to a final report. Special attention was paid to the case studies. In each case, the staff of the program were given a copy of the case study and had the opportunity to correct any false impressions we had. Their help was appreciated.

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